Attachment List

1. Conduct a Public Hearing and Adopt Resolution with Actions for the Approval of Construction of Phase 1 of Senior Assisted Living and Congregate Care Facility including a New 4-story Residential Building with 199 Rental Units (including 10 very low income units) and Associated Site Improvements at 1504-1620 South Main Street (Staff Contact: Shaunn Mendrin, 408-586-3278)

Attachments:

A: City Council Resolution for approval

B: 10-22-14 Planning Commission Staff Report

C: 10-22-14 Planning Commission Clarifications Memo

D: 10-22-14 Planning Commission Meeting Minutes

E: Applicant Request for Park Fee Waiver

F: Adopted Planning Commission Resolution 14-033

G: Site Development Plans

H: Vesting Minor Tentative Map

I: Applicant Statement on Parking Requirements

J: Project Description Narrative and Density Bonus Concession

K: Public Street Maintenance Agreement

RESOLUTION NO. _____

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MILPITAS APPROVING A VESTING MINOR TENTATIVE MAP NO. TP14-0001, SITE DEVELOPMENT PERMIT NO. SD14-0006, AND DENSITY BONUS NO. DB14-0001 FOR THE CONSTRUCTION OF PHASE 1 OF A SENIOR ASSISTED LIVING AND CONGREGATE CARE FACILITY INCLUDING A NEW 4-STORY RESIDENTIAL BUILDING WITH 199 RENTAL UNITS (INCLUDING 10 VERY LOW-INCOME UNITS) AND ASSOCIATED SITE IMPROVEMENTS LOCATED AT 1504-1620 SOUTH MAIN STREET

WHEREAS, on April 22, 2014, an application was submitted by Joseph Callahan, South Main Senior Lifestyles, LLC ("Applicant"), 5674 Stoneridge Drive, Suite 212, Pleasanton, CA 94588, to construct an assisted living and congregate care facility with 199 rental units (including 10 very low-income units) at 1504-1620 South Main Street ("Project"). The property is located within R4, TOD, Multi-Family Residential with Transit Oriented Development Overlay Zoning District (APN: 86-22-027, -028, -046, -047 and -048); and

WHEREAS, in March 2002, the City Council of the City of Milpitas approved the Midtown Specific Plan to guide development in the Midtown Area of the City which includes the project site along South Main Street; and

WHEREAS, Milpitas City Staff conducted a full analysis of the proposed Project to ensure compliance with the City's General Plan, Midtown Specific Plan, Zoning Code, Engineering Design Requirements and all other applicable laws, regulations and standards, as all further explained in detail in City staff reports to the Planning Commission and City Council and are attached as part of the administrative record; and

WHEREAS, the Planning Division completed an environmental assessment for the Project in accordance with the California Environmental Quality Act (CEQA), and recommends that the City Council determine the Project is exempt under CEQA pursuant to CEQA Guidelines Section 15182 (Residential Project Pursuant to Specific Plan) and Section 15168 (Program EIR); and

WHEREAS, on October 22, 2014, the Planning Commission held a duly noticed public hearing on the subject application and considered evidence presented by City staff, the applicant, and other interested parties and adopted a resolution recommending the City Council approve Minor Tentative Map No. MT14-0001, Site Development Permit No. SD25-0006, and Density Bonus No. 14-001; and

WHEREAS, on November 18, 2014, the City Council held a duly noticed public hearing on the subject application and considered evidence presented by City staff, the applicant, and other interested parties; and

NOW, THEREFORE, the City Council of the City of Milpitas hereby finds, determines, and resolves as follows:

Section 1: The City Council has considered the full record before it, which may include but is not limited to such things as the staff report, testimony by staff and the public, and other materials and evidence submitted or provided to it. Furthermore, the recitals set forth above are found to be true and correct and are incorporated herein by reference.

Section 2: A Program Environmental Impact Report (the "EIR") was prepared and certified (SCH#2000092027) for the Midtown Specific Plan on March 19, 2002. The EIR assumed development of this property for residential uses similar to the proposed Project.

No new environmental document is required pursuant to CEQA in connection with this Project and development of the property in accordance with the approved First Amended and Restated Disposition and Development Agreement (DDA) approved by the Milpitas Housing Authority on November 19, 2013. Government Code Section 65457 (CEQA Guidelines Section 15182) provides a statutory exemption for residential projects that are consistent with a specific plan for which an EIR was certified after January 1, 1980. Additionally, CEQA Guidelines Section 15168(c)(2) provides that, if the Project is within the scope of the Midtown Specific Plan EIR, no new environmental document is required so long as no new effects could occur or no new mitigation measures are required.

There are no substantial changes in the proposed Project or in the circumstances in which the proposed Project will be undertaken that are different from those reviewed in the Midtown Specific Plan EIR, nor does new information show that any additional environmental impacts will occur. The applicant submitted a Traffic Impact Analysis prepared by TJKM Transportation Consultants dated May 13, 2014, which shows that the proposed Project will generate less peak hour traffic than the development assumed on the site in the Midtown Specific Plan EIR and substantially less peak hour traffic than previously approved development on the site, resulting in substantially equivalent or lower air quality and greenhouse gas impacts. Further, development capacity in the Midtown Specific Plan Area also still exists, and the area has not reached full build out. There are 5,228 residential units planned for the entire Midtown area, and 2,312 have been constructed and/or permitted. Specifically, of the 1,680 residential units planned for the South Main Street/Abel area, 1,270 have been constructed and/or permitted, leaving capacity for an additional 410 units. Access and circulation to the area remain the same as envisioned in the EIR, as well as infrastructure and utility capacity. The proposed Project will be built in accordance with the development standards and design guidelines of the Midtown Specific Plan, and South Main Street Plan Line Study. Mitigation measures required as part of the Midtown Specific Plan EIR are hereby fully incorporated by reference. The Project is therefore statutorily exempt from CEQA as provided in Guidelines Sections 15182 and 15168 because no new effects could occur, no new mitigation measures are required, and the Project is within the scope of the Midtown Specific Plan EIR. Hence, no new environmental document is required.

Section 3: **Minor Tentative Map Findings (Section XI-1-20.01) -** The City Council makes the following findings based on the evidence in the public record in support of Minor Tentative Map No. TP14-0001.

1. *The tentative subdivision map is consistent with the Milpitas General Plan.*

As explained in detail in the accompanying Planning Commission's staff report, the Project is consistent with this finding because the proposed Minor Vesting Tentative Map will create three parcels which conforms the R4 Zoning District, and to the development standards of the General Plan and Zoning Code. The proposed Project type, density and size are all consistent with the General Plan Land Use designation because the use is permitted, and the Project size with density bonus is within the density requirements of the General Plan.

The Project site has a General Plan land use designation of Multi-Family Residential, Very High Density and is zoned R-4, TOD, Multi-Family Residential, Very High Density with a Transit Oriented Development Overlay. These designations allow up to 60 units per acre, however, the applicant is also requesting a 20% density bonus based on State Density Law when a development provides 5% of affordable units for occupancy of very low-income senior households. Based on the provision of R-4

Zoning, the site would be allowed up to 181 units at 60 units per acre at 3.02 acres. Application of the Density Bonus for Affordable Housing of 20% allows an additional 36 units for a total 217 units allowed on the site. As part of the Density Bonus an applicant is allowed up to three concessions based on the percentage and affordability of housing provided. Based on the proposed project, the applicant will be allowed one concession, see the Site and Architectural Design Section for further clarification.

The Project is consistent with the General Plan designation and zoning district because the applicant is proposing a senior residential project of 199 units, which is below the maximum 217 units authorized with State Density Bonus. .

Section 4: Site Development Permit (Section XI-10-57-03-1(F)) - The City Council makes the following findings based on the evidence in the public record in support of Site Development Permit No. SD14-0006:

1. *The layout of the site and design of the proposed buildings, structures and landscaping are compatible and aesthetically harmonious with adjacent and surrounding development.*

The Project is consistent with this finding because the Project is well designed and conforms to the development regulations of the Zoning District and General Plan. The Project is designed to create two new public streets to extend the circulation network in the vicinity of the project site which will increase compatibility. The building is well designed and includes varied materials with a richness and detail that will complement surrounding development. Further, the completion of street improvements along South Main Street will be help in the connectivity and street circulation in the Midtown area.

2. *The project is consistent with the Milpitas Zoning Ordinance.*

The Project is consistent with this finding because the Project conforms to the development standards and requirements of the R4, Multi-Family Residential zoning district; the use is allowed by the Zoning District, and the Project complies with other aspects of the Zoning Ordinance, such as the Density Bonus Ordinance by providing ten (10) very low-income units.

The Project conforms to the development standards required in the R4 and TOD Overlay Districts. The table below demonstrates how the Project is consistent with these development standards.

Summary of Development Standards

	Standard	Proposed	Complies?
Setbacks (Minimum)			
Front	12 feet	10 feet	Yes*
Street Side	12 feet	10 feet	Yes*
Interior	10 feet	20 feet	Yes
Rear	10 feet	40 feet	Yes
Density (Maximum)	60/acre	66/acre with density bonus	Yes
Building Height (Maximum)	75 feet	68 feet	Yes
*Incentive as per State Density Bonus			

3. *The project is consistent with the Milpitas General Plan.*

The Project is consistent with this finding because of the reasons previously stated.

4. *The project is consistent with the Midtown Specific Plan.*

The Project is consistent with this finding because development capacity in the Midtown Specific Plan Area still exists, and the area has not reached full build out as envisioned in the Specific Plan. There are 5,228 residential units planned for the area, and 2,312 have been constructed and/or permitted. Specifically, of the 1,680 residential units planned for the South Main Street/Abel area, 1,270 have been constructed and/or permitted leaving development capacity for 410 units. Access and circulation to the Project site are consistent with the vision to complete the street network with the infrastructure and utility capacity. The Project will be built in accordance with the development standards and design guidelines of the Midtown Specific Plan.

Section 5: Density Bonus for Affordable Housing Developments (Section XI-10-55-15-D) - The City Council makes the following findings based on the evidence in the public record in support of Density Bonus No. DB14-0001:

1. *Determination of Maximum Allowable Densities. The maximum allowable base density specified in the General Plan, including any other permitted increases to density.*

The base R-4 Zoning would allow up to 181 units at 60 units per acre at 3.02 acres and the application of the Density Bonus of 20% allows an additional 36 units for a total 217 units allowed on the site. The proposed Project includes 199 dwelling units, which is within the allowable density with the application of the Density Bonus for Affordable Housing.

2. *Unit Type and Location. All affordable units shall be reasonably dispersed throughout the project, shall contain on average the same number of bedrooms as the non-affordable units in the project, and shall be comparable with the non-affordable units in terms of appearance, materials and finished quality. The Planning Commission may recommend to the City Council and/or Redevelopment Agency modifying the requirements as to unit size or type, if it is found that such a modification would better serve the affordable housing need of Milpitas.*

The affordable units will be dispersed throughout the Project and subject to review and approval by the Planning Director and Principal Housing Officer as contained in the Conditions of Approval.

3. *Agreement. Prior to final building inspection and occupancy for a project containing affordable units, the applicant shall execute and record at the Santa Clara County Recorder's Office the City's Agreement Imposing Restrictions on Real Property, which Agreement shall explain the affordability requirements. The agreement shall be approved by the Milpitas City Attorney prior to recordation.*

The applicant has entered into a Disposition of Development Agreement (DDA) with the City (Housing Authority and City Council) and it was amended on November 19, 2013. The Amended DDA requires the applicant to record a Regulatory Agreement that will serve to satisfy this requirement by imposing very low-income restrictions on the real property. In addition, the Conditions of Approval for this project will also be required to be recorded against the property. The Amended DDA may be found at the following link:
http://www.ci.milpitas.ca.gov/_pdfs/council/2013/111913/item_ha3a.pdf

4. Retaining Affordability. A developer shall agree to, and the City shall insure continued affordability of, all lower- or very low-income density bonus units for thirty (30) years or a longer period of time, if required by the construction or mortgage financing assistance program, mortgage insurance program, or rental subsidy program. If the City does not grant at least one (1) additional concession or incentive, in addition to a density bonus as specified in Section XI-10-54.15(E), Density Bonus Conditions, of this Chapter, the developer shall agree to, and the City shall ensure continued affordability for a minimum of ten (10) years of all lower or very low-income housing units receiving a density bonus.

The designated affordable units will be required to remain in place for a minimum of 30 years as stated in the Conditions of Approval and as will be required with a Regulatory Agreement to be recorded over the Project site. One concession is allowed for the development which results in a decreased setback for the front and street side setbacks allowing 10 feet where 12 is required.

Density Bonus Concession

Density Bonus for Affordable Housing allows a developer to request concessions/incentives from the City's Zoning Code based on the affordability of the development. This project will be allowed one concession. The applicant has submitted a project description and request for an incentive/reduction from Section XI-10-11-5.d.i (TOD-R4: Front and Street Side Setbacks) of the Zoning Code to allow a front and street setback of 10 feet.

This type of deviation is common for larger residential in-fill developments. The requested incentive is to allow a 10 foot setback instead of the 12 foot minimum. Typically in the R4 base zoning the front and street side setbacks are a range of 10-12 feet. The current site zoning is restrictive in that it has minimum of 12 feet due to the TOD Overlay. The proposed 10 feet is within the range allowed in the base zone of R4.

Section 6: **Urgency Ordinance (240.2) Exception -** The City Council makes the following findings based on the evidence in the public record in support of an exception to the Urgency Ordinance.

On August 26, 2014, the City Council adopted Urgency Ordinance No. 240.2 which implemented water use restrictions. Specifically as it relates to this Project, the Urgency Ordinance prohibited the construction of new pools (5.03) and the use of potable water for the installation of new landscape unless it is served by Reclaimed Water (5.07). Section 5.08 of the Urgency Ordinance allows the City Council to grant exceptions as needed. The subject site is not located in an area where reclaimed water is available for use and therefore they must use potable water for all on-site irrigation. The proposed Project is for senior housing and the proposed pool will provide means for low impact exercise for the residents. Since potable water is the only source for irrigation and the pool will provide opportunity for low impact exercise for the residents of the new community, the City Council approves the exemption request.

Section 7: The City Council of the City of Milpitas hereby approves the Vesting Minor Tentative Map No. TP14-0001, Site Development Permit No. SD14-0006, and Density Bonus No. DB14-0001 based on the above Findings and subject to the Conditions of Approval attached hereto as Exhibit 1 incorporated herein.

PASSED AND ADOPTED this _____ day of _____, 2014, by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

_____

Mary Lavelle, City Clerk

APPROVED:

_____

Jose S. Esteves, Mayor

APPROVED AS TO FORM:

_____

Michael J. Ogaz, City Attorney

EXHIBIT 1

CONDITIONS OF APPROVAL
South Main Senior Lifestyles
Vesting Minor Tentative Map No. TP14-0001, Site Development Permit No. SD14-0006 and Density Bonus No. DB14-0001

General Conditions

1. General Compliance. The applicant and owner, including all successors in interest (collectively "Permittee") shall comply with each and every condition set forth in this Permit. This Vesting Minor Tentative Map No. TP14-0001 and a Site Development Permit No. SD14-0006 (collectively "Permit") shall have no force or effect and no building permit shall be issued unless and until all things required by the below-enumerated precedent conditions have been performed or caused to be performed and this Resolution has been recorded by the Permittee with the Santa Clara County's Recorder Office and a copy shall be provided to the Planning Department. **(P)**

2. Effective Date. Unless there is a timely appeal filed in accordance with the Milpitas Zoning Code, the date of approval of this Permit is the date on which the decision-making body approved this Permit. **(P)**

3. Acceptance of Permit. Should Permittee fail to file a timely appeal within twelve (12) calendar days of the date of approval of this Permit, inaction by Permittee shall be deemed to constitute each of the following:

   a. Acceptance of this Permit by Permittee; and
   b. Agreement by the Permittee to be bound by, comply with, and to do all things required of or by Permittee pursuant to all of the terms, obligations, and conditions of this Permit. **(P)**

4. Permit Expiration. Pursuant to Section XI-10-64-06 of the Milpitas Zoning Code, this Permit shall become null and void if the activity permitted by this Permit is not commenced within two (2) years from the date of approval, or for a project submitted with a tentative map, within the time limits of the approved tentative map. Pursuant to Section XI-10-64.06(B) of the Milpitas Zoning Code, an activity permitted by this Permit shall be deemed to have commenced when the project: **(P)**

   a. Completes a foundation associated with the project; or
   b. Dedicates any land or easement as required from the zoning action; or
   c. Complies with all legal requirements necessary to commence the use, or obtains an occupancy permit, whichever is sooner. **(P)**

5. Time Extension. Pursuant to Section XI-10-64.07 of the Milpitas Zoning Code, unless otherwise provided by State law, Permittee shall have the right to request a one-time extension of the Permit if the request is made in writing to the Planning Division prior to the expiration date of the approval. **(P)**

6. Project Job Account. If Permittee's project job account is at any time delinquent or below the required deposit amount, City will not continue to review or process the application until Permittee's private job account is paid in full and the required deposit has been made. Additionally, prior to the issuance of any building permit or occupancy permit, as applicable, Permittee shall pay in full the project account balance and establish a remaining balance of at least twenty-five percent (25%) of the required initial deposit. **(P)**

7. Notice. Pursuant to California Government Code Section 66020, any protest filed in court relating to the imposition of fees, dedication, reservations, or other exactions to be imposed on the development project shall be filed within ninety (90) days after the date of the adoption of this Resolution. This provision serves as notice from the local agency to the Permittee that the ninety (90) day period in which the Permittee may file a protest has begun under California Government Code Section 66020(d)(1). **(P)**

8. Cost and Approval. Permittee shall fully complete and satisfy each and every condition set forth in this Resolution and any other condition applicable to the project to the sole satisfaction of the City. Additionally, Permittee shall be solely responsible and liable for the cost to satisfy each and every condition. Permittee shall pay all required fees and charges to City at the rate in effect at time of building permit issuance, or, the rate in effect when the fees and charges are due and paid in full to City. There is no vesting of any fees or charges with the adoption of this Resolution. **(P)**

9. Conditions. Each and every condition set forth in this Exhibit shall apply to the project and continue to apply to the project so long as the Permittee is operating the project under the permits and approvals in this Resolution. **(P)**

10. Compliance with Laws. The construction, use, and all related activity authorized under this Permit shall comply with all applicable local, state, and federal laws, rules, regulations, guidelines, requirements, and policies. **(CA/P)**

11. Compliance with Midtown Specific Plan Program EIR MMRP (SCH#2000092027): Permittee shall comply with all applicable mitigation measures contained in the Mitigation and Monitoring Reporting Program (MMRP) for the Midtown Specific Plan EIR (City Council Resolution #7150 adopted on March 19, 2002) to the satisfaction of the Planning Director. **(P)**

12. Previous Approvals. Permittee shall abide and continue to comply with all previous City approvals, permits, or requirements relating to the subject property, unless explicitly superseded or revised by this Permit. **(P)**

13. Indemnification. To the fullest extent permitted by law, Permittee shall indemnify, defend with counsel of the City's choosing, and hold harmless City, its City Council, its boards and commissions, officials, officers, employees, and agents from and against any and all claims, demands, obligations, damages, actions, causes of action, suits, losses, judgments, fines, penalties, liabilities, costs and expenses (including without limitation, attorney's fees, disbursements and court costs) of every kind and nature whatsoever which may arise from or in any manner relate (directly or indirectly) to (i) City's approval of the project, including but not limited to, the approval of the discretionary permits, maps under the Subdivision Map Act, and/or the City's related determinations or actions under the California Environmental Quality Act, and (ii) Permittee's construction, operation, use, or related activity under this Permit. This indemnification shall include, but not be limited to, damages awarded against the City, if any, costs of suit, attorneys' fees, and other expenses incurred in connection with such claim, action, causes of action, suit or proceeding whether incurred by applicant, City, and/or the parties initiating or bringing such proceeding. Permittee shall indemnify the City for all of City's costs, attorneys' fees, and damages which City incurs in enforcing the indemnification provisions set forth in this condition. Permittee shall pay to the City upon demand or, as applicable, to counsel of City's choosing, any amount owed pursuant to the indemnification requirements prescribed in this condition. **(P/CA)**

14. Revocation, Suspension, Modification. This Permit may be suspended, revoked, or modified in accordance with Section XI-10-63.06 of the Milpitas Zoning Code. **(P)**

15. Severability. If any term, provision, or condition of this Permit is held to be illegal or unenforceable by the Court, such term, provision, or condition shall be severed and shall be inoperative, and the remainder of this Permit shall remain operative, binding, and fully enforceable. **(P)**

16. Permittee shall develop the approved project in conformance with the approved plans approved by the City Council on (November 18, 2014), in accordance with these Conditions of Approval.

    Any deviation from the approved site plan, elevations, materials, colors, landscape plan, or other approved submittal shall require that, prior to the issuance of building permits, the Permittee shall submit modified plans and any other applicable materials as required by the City for review and obtain the approval of the Planning Director or Designee. If the Planning Director or designee determines that the deviation is significant, the owner or designee shall be required to apply for review and obtain approval of the Planning Commission or City Council, as applicable, in accordance with the Milpitas Zoning Code. **(P)**

17. Compliance with Fire Department and CA Fire Code. The Project shall comply with the requirements of the Fire Department and the CA Fire Code. Changes to the site plan and/or building(s) requires review and approval by the Fire Department. **(F)**

Project Specific Conditions

18. Density Bonus. The proposed Project shall provide a minimum of 10 very-low (50% AMI) units within the Phase 1 project and the project may have a reduced front and street side setback of 10 feet per approved concession. The units shall be subject to the following and review and approval by the Planning Director:
    a. The 10 units shall be equally disbursed throughout the building.
    b. The 10 units shall be restricted to very-low (50% AMI) for a minimum of 30 years or longer as specified in the Disposition of Development Agreement. (P)

19. Parkland In-Lieu Fees. The City Council agrees to waive the parkland in-lieu fees in the amount of $1,325,394 for the Project, provided, that if the subject Project site changes the approved use from a senior assisted living and congregate care facility serving individuals over sixty-two (62) years old with ten (10) very low-income units to any other use whatsoever, the Permittee and/or property owner at the time of the change in use shall be required to fully satisfy and pay the full parkland in-lieu fees in effect at that time.

20. Disposition of Development Agreement. Permittee shall comply with all requirements set forth in the First Amended Disposition of Development Agreement (DDA), as may be amended, subject to the review and approval of the Planning Director.

21. Use. The cafeteria located on the ground floor shall be available for staff, residents and their guests only. The cafeteria shall not be open to the public. (P/E)

22. Landscaping. A final landscaping plans shall address the following items and it shall be subject to review and approval by the Planning Director prior to issuance of any building permit or off-site improvement plans (whichever occurs first):
    a. All equipment located between the building and back of sidewalk shall be screened fully.

b. Trees proposed on the EVA shall be a species that has a columnar growth pattern and is evergreen, such as a Fern Podocarpus.
c. The sound wall along the railroad corridor shall include climbing vine plantings on both sides of the wall.
d. All street landscaping shall be consistent with the Midtown Specific Plan.
e. The sound wall along the east property line shall be a maximum height of 8 feet and shall be removed when the adjacent nonresidential use changes to a residential or mixed use development. **(P)**

23. Wall replacement along South Main Street. Permittee shall replace the sound walls along South Main Street as indicated in the plans. The walls shall be replaced prior to any occupancy of the Phase I building. Permittee shall provide plans subject to review and approval by the Planning Director. **(P)**

24. Lighting levels/light spill. Permittee shall provide photometric plans for the on-site improvements clearly indicating that the proposed lighting plan does not result in light overspill onto adjacent properties.

25. Written Response to Conditions of Approval and Midtown Specific Plan EIR MMRP: Permittee shall provide a written response with each permit submittal indicating how and where (sheet) each Condition of Approval has been addressed. **(All)**

26. Public Improvements: Prior to final map approval, Permittee shall obtain design approval and bond for all necessary public improvements along S. Main, Cedar Way, Costa Street, and the public improvements across Phase 2, including but not limited to the following:
    i. Midtown Specific Plan: All S. Main Street offsite frontage improvements (Phase 1 and Phase 2) including street lights, sidewalks, tree wells, landscape, bus stops, street furniture, signing, striping, sound walls, and traffic signal shall be constructed per the Midtown Specific Plan and S. Main Street Planline design guidelines and standards in Phase 1 of the project. S. Main Street public ROW dedication shall be provided to the ultimate back of sidewalk (if needed) and a 10' PSUE dedication shall be provided beyond the ultimate back of sidewalk.
    ii. Utility Relocation: Underground utilities (such as joint trench conduit, utility boxes, etc.) shall be relocated and adjusted as necessary to accommodate S. Main Street tree well placements per the Midtown Specific Plan and S. Main Street Planline design guidelines.
    iii. Main Street Pavement: Phase 1 of the project shall include AC pavement base repairs, micro-surfacing, and pavement restriping the full width of S. Main Street project (Phase 1 and Phase 2) frontage.
    iv. Public Streets: Cedar Way and Costa Street shall be public streets. On these public streets, public ROW dedication shall be provided to the ultimate back of sidewalk and a 10'minimum width PSUE dedication shall be provided beyond the ultimate back of sidewalk or additional easement width as required by the City Engineer.
    v. Traffic Signal Improvements: A new traffic signal shall be constructed per the Midtown Specific Plan and S. Main Street Plan Line design guidelines and standards to replace the existing traffic signal at S. Main Street/Cedar Way intersection. The traffic signal shall be constructed and in operation prior to issuance of First Certificate of Occupancy (temporary or final).
    vi. All public improvements shall be installed and accepted prior to the issuance of the first Certificate of Occupancy (temporary or final).

27. Cedar Way and Costa Street Maintenance; Permittee shall maintain all public improvements along and within Cedar Way and Costa Street. The Parties shall enter into a Maintenance

Agreement prior to issuance of any building permit subject to the review and approval of the City Engineer. Maintenance activities will include restoration and capital improvements necessary to meet the City's standard of service. The following levels of service shall be maintained for public improvements:

i. Limits: Cedar Way and Costa Street shall be privately maintained public streets. The limit of private maintenance on Cedar Way shall begin from the back portland concrete valley gutter on the east side of S. Main Street to Costa Street and bordered by back of sidewalks on Cedar Way. The limit of private maintenance on Costa Street shall begin from Cedar Way to the project southerly limit and bordered by the back of sidewalk and railroad soundwall.

ii. Scope: Maintenance of these public streets shall include but not be limited to AC pavement, sidewalk, street lights, storm drain inlets, C.3 Storm Water Treatment areas, railroad sound wall, landscapes, trees, striping and signing.

iii. Maintenance Level: These streets shall be regularly maintained to the following minimal standard levels:

(1) Pavement, sidewalks, landscapes, and storm drain inlets shall be kept free of debris and litter (street sweeping, etc.),
(2) Pavement, sidewalks, street lights, and sound walls shall be kept free of graffiti and private signage,
(3) Pavement Condition Index (PCI) shall be maintained above 70,
(4) Continuous vehicular access shall be maintained on all public streets
(5) Continuous ADA access shall be maintained on sidewalks
(6) Sidewalks shall be kept free of tripping hazards,
(7) Landscaping, trees, and C.3 Storm Water treatment areas shall be irrigated, pruned, and fertilized to maintain healthy growth,
(8) Street lights shall be in a good state of repair to provide nighttime illumination for safe vehicle and pedestrian travel,
(9) All C.3 Storm Water Treatment facilities shall be maintained to comply with all the provisions of the MRP.

iv. Insurance and Indemnity: Permittee shall be required to obtain adequate insurance and indemnify the City and its officers, employees or agents for any acts or omissions arising from or relating to the maintenance activities described in this condition, all subject to Risk Manager review and approval.

28. Sanitary Sewer Replacement: Permittee shall replace approximately 1,250 linear feet of existing 8-inch sewer pipe with 12-inch diameter sewer pipe along S Main Street described as Project 11D in the 2009 Sewer Master Plan. The work extends from approximately 270 linear feet South of the Cedar Way intersection northward and ties into the sewer line replacement previously installed by the Shea Apartment project. Permittee frontage is approximately 850 linear feet. Permittee is eligible for reimbursement and/or fee credit toward the sewer connection fee for up to 400 linear feet of the sewer line replacement based on the City's approved budget for the replacement cost and in accordance with City's Development Fee Ordinance. Prior to approval of the final map, the parties shall enter into a reimbursement and/or fee credit agreement for City Council review and consideration.

29. Storm Drain Replacement: Permittee shall replace the existing Storm Drain line along S. Main Street from the northern limit of Phase 2 to the southern limit of Phase 1 to the nearest manhole.

30. Waterline Installation: Permittee shall install approximately 950 linear feet of public water pipeline around the perimeter of the Phase 1 and Phase 2 sites connecting the public water system in Costa Street with the public water system in South Main Street. Hydraulic modeling is required to confirm the minimum pipeline diameter necessary to meet maximum day demand

plus fire flow of 2,500 gallons per minute. There is insufficient space for the proposed public 8 inch water pipeline between the proposed Phase 2 Building foundation and the storm water treatment area along Cedar Way and this pipeline is not allowed.

31. Storm Drain Connection to S. Main: Permittee shall extend the new public storm drain on Costa Street across the Phase 2 property and connect to the public Storm Drain system on S. Main. Permittee shall submit a revised utility layout for approval by the City Engineer.

32. Easements: Permittee shall dedicate to the City the following easements:

    i. 20' EVA along the South boundary of the property, unless otherwise specified by the Fire Department
    ii. 20' PSUE for the Proposed Storm Drain Main and Water main crossing the Phase 2 property

33. EVA Access: Permittee shall maintain the EVA free of obstructions of any kind. Underground backflow preventers do not meet City Standards. Permittee shall relocate the proposed backflow devices outside of the proposed EVA and submit a detail of the utility box layout on the improvement plans.

34. C.3 Special Project Status: Permittee has requested special project status for this development under the Municipal Regional Permit's (MRP) provisions for a residential development. In order to continue to qualify under this provision, Permittee shall not propose commercial or retail with the Project limits. If commercial or retail operations are proposed, the project must re-apply for Special Project status. Special Project credits shall only be applied after the Permittee has demonstrated that all opportunities for LID treatment have been exhausted or are infeasible. Permittee shall submit a explanation discussing the feasibility of additional LID treatment.

35. Solid Waste Handling: Permittee shall submit a revised solid waste handling plan. The revised solid waste handling operation shall have a flagger present during all collection operations to ensure pedestrian and vehicular safety.

36. City Standards: All design and construction of public and private improvements shall be in compliance with City guidelines and standard drawings.

37. Utilities: Permittee shall comply with all of the following:

    i. Independent Services: Each parcel is required to have independent utility services.
    ii. CDPH Waivers: All utility designs shall be in accordance with City and State requirements. New public water pipelines shall be in compliance with California Department of Public Health Water Works Standards. Waivers will not be granted for new construction. Permittee shall coordinate utility improvements with other surface improvements, such as landscaping and paved surfaces, to ensure that conflicts do not exist.
    iii. SC Zone 1 Water Supply: The Project shall be served by SC Zone 1 water supply. Separate services are required for domestic, irrigation, and fire uses. Permittee is alerted that on-site pumping to upper floors may be required.
    iv. Phase 2: Permittee shall design all utilities in the Costa Street extension around the Phase 2 lot to ensure there is sufficient space for all utilities. Private utilities are not allowed in public streets.
    v. Pool Waiver: Due to the drought, the City has adopted water conservation measures. Permittee is required to seek an exception from the City Council to fill swimming pools and fountains and to irrigate landscaping with potable water.

vi. Grease Interceptor: Permittee is advised to relocate the proposed grease waste interceptor away from public dining and/or gathering areas.

vii. Backflow Preventer: Backflow devices are not permitted in below grade vaults and do not meet City standards. Permittee shall use a City Standard backflow device and submit a revised utility plan prior to final map approval or building permit issuance, whichever occurs first.

viii. C.3 Compliance: Permittee is advised that C3/LID compliance requirements are dependent upon whether the dining area is open to the public. Permittee shall revise the Storm Water Control Plan as necessary and shall meet all City and State requirements.

ix. Vehicular Crossing: As part of the design of Phase 2, the Permittee shall revise the biotreatment area along Cedar Way adjacent to the proposed Phase 2 building to allow for pedestrian and vehicle crossings and shall revise the Storm Water Control Plan at that time to account from this revision.

38. Development Fees: Permittee shall submit the following items with the building permit application and any other applicable fees and pay the related estimated fees prior to any building permit issuance:

a. Sewer Needs Questionnaire and/or Industrial Waste Questionnaire
b. Water Service Agreement(s) for water meter(s), detector check(s), and double check detector assembly.
c. Storm water connection fee of $21,562 per acre.
d. Water, sewer and treatment plant fees will be calculated at the time of building plan check submittal.
e. Calaveras Blvd Widening Traffic Impact Fee of $235 per residential unit (in 2009 dollars) prior to building permit issuance. Fee shall be adjusted per ENR index rate at the time of building permit issuance.

Contact the Land Development Section of the Engineering Division at (408) 586-3328 to obtain the form(s). *The above fees are preliminary estimates and subject to change.* There is no vesting of the fees with the adoption of this Resolution. **(E)**

39. Building Permit Automation Fee: Prior to any building permit issuance, Permittee shall pay all applicable development fees, as determined by the City Engineer in accordance with the most current approved fee schedule adopted by the City Council, including but not limited to, connection fees (water, sewer and storm), Transit Area impact fee, plan check and inspection deposit, and 2.5% building permit automation fee as approved by City Council Resolution No. 7590. **(E)**

40. Community Facilities District (CFD) Annexation: Prior to final map approval, Permittee shall submit an executed consent to annex the subject property into CFD 2005-1 and shall agree to pay the special taxes levied by CFD 2005-1 for the purpose of maintaining the public services. The petition to annex into the CFD shall be finalized concurrently with the final map recordation or prior to any building permit issuance, whichever occurs first. Permittee shall comply with all rules, regulations, policies, and practices established by State Law and by the City with respect to the CFD including, without limitation, the requirements for notice and disclosure to future owners and residents. **(E)**

41. Final Map: Prior to issuance of any building permit, the final map shall be recorded. The final map submittal shall meet the following requirements:

a. Provide a current title report with your final map submittal, not more than 90 days old.
b. All final maps shall designate all common lots and easements as lettered lots or lettered easements.
c. The final map shall clearly delineate the project property line and the County right of way line. County right of way and Project boundary should be contiguous.
d. All final maps shall be tied to the North America Datum of 1983 (NAD 83), California Coordinate of 1983, zone 3.
e. Permittee shall dedicate all necessary easements for public utilities, emergency vehicle access, solid waste collection, pedestrian corridors, sidewalks, trails, paths, and public access on the final map for acceptance by the City in compliance with the City's Engineering Guidelines and the approved Tentative Map.
f. Prior to recordation of any final map, Permittee shall submit to the City a digital copy of the approved final map in AutoCAD and GIS format. **(E)**

42. Property Management Association: Prior to final map approval, Permittee shall establish a Property Management Association. The Property Management Association shall be responsible for the maintenance of the landscaping, walls, buildings, private street lights, common area and private streets and shall have assessment power. The Property Management Association shall manage the onsite water and sewer system and implement the Solid Waste Handling Plan. **(E)**

43. Improvement Plans: Prior to final map approval, Permittee shall obtain design approval and bond for all necessary public improvements, including but not limited to the following:

a. Removal and installation of new curb, gutter, and sidewalk, median modification or installation, signage and striping, street lights, street trees, fire hydrants, bus stop, and storm, water, and sewer service installation.
b. All improvements plans shall be prepared using Vertical Datum of 1988 (NAVD 88). The specific city benchmark used for the project shall be indicated on the cover sheet of each improvement plan set.
c. Plans for all public improvements shall be prepared on Mylar (24"x36" sheets) with City Standard Title Block and developer shall submit a digital copy of the Record Drawings AutoCAD and GIS format upon completion of improvements to the satisfaction of the City Engineer.
d. Permittee shall also execute a secured public improvement agreement. The agreement shall be secured for an amount of 100% of the engineer's estimate of the construction cost for faithful performance and 100% of the engineer's estimate of the construction cost for labor & materials. The public facilities such as water meters, RP backflow preventers, sewer clean outs, etc., shall be placed so access is maintained and kept clear of traffic. **(E)**

44. Initial Acceptance: All improvements must be installed in accordance with the City of Milpitas standard drawing and specification, and shall be constructed to the City Engineer's satisfaction and accepted by the City prior to issuance of any final certificate of occupancy of any unit. **(E)**

45. Utility Undergrounding: Prior to issuance of the first Certificate of Occupancy (temporary or final), Permittee shall underground all existing wires and overhang utilities and remove all related poles within the proposed development and along all street frontages. All proposed utilities within the subdivision shall also be undergrounded. The improvement plans shall show all existing utilities within and bordering the proposed development, and clearly identify the existing PG&E wire towers and state wire voltage. All utility vaults, boxes, cabinets, and pedestals shall be identified and labeled on the improvement plans. Above ground utility facilities shall be

underground, relocated, or screened to the satisfaction of the City Engineer and the Planning Director. **(E)**

46. Joint Trench Relocation: The joint trench shall be relocated in the field, if necessary, to accommodate the approved street layout (sidewalks, trees, streetlights, etc.) to the satisfaction of the City Engineer and the Planning Director. All joint trench structures (vaults, boxes, cabinets, etc.) shall be adjusted to the final grade. **(E)**

47. Encroachment Permit: Prior to any work within the public right of way or City easement, Permittee shall obtain an encroachment permit from City of Milpitas Engineering Division. Prior to installing offsite improvements, Permittee shall obtain an encroachment permit from the City of Milpitas and all necessary encroachment permits from other affected agencies and private parties, including but not limited to, Pacific Gas and Electric, SBC, Comcast, Santa Clara Valley Water District, Santa Clara County road and Airport Department, and Santa Clara Valley Transportation Agency (VTA). Copies of any approvals or permits shall be submitted to the City of Milpitas Engineering Division as a part of the encroachment permit review. **(E)**

48. Agency Approval: It is the sole responsibility of Permittee to obtain any necessary encroachment permits from affected agencies and private parties, including but not limited to, Pacific Gas and Electric, SBC, Comcast, Santa Clara Valley Water District and Caltrans. Copies of any approvals or permits must be submitted to the City of Milpitas Engineering Division. **(E)**

49. Construction Schedule: Prior to start of any construction, Permittee shall submit a construction schedule and monitoring plan for City Engineer review and approval. The construction schedule and monitoring plan shall include, but not be limited to, construction staging area, parking area for the construction workers, personnel parking, temporary construction fencing, and construction information signage and establish a neighborhood hotline to record and respond to neighborhood construction related concerns. Permittee shall coordinate their construction activities with other construction activities in the vicinity of this project. Permittee's contractor is also required to submit updated monthly construction schedules to the City Engineer for the purpose of monitoring construction activities and work progress. **(E)**

50. Demolition: All utilities shall be properly disconnected before the building can be demolished. Show (state) how the water service(s), sewer service(s) and storm service(s) will be disconnected. The water service shall be locked off in the meter box and disconnected or capped at main line in the street if the water meter is not to be used. The sanitary sewer shall be capped at the clean out near the property line or approved location if it is not to be used. The storm drain shall be capped off at a manhole or inlet structure or approved location if it is not to be used. **(E)**

51. Maximum Slopes: All slopes adjacent to public sidewalks and streets shall be designed to a maximum grade of 3:1 slope. The grading design shall also provide a 1' flat bench at the top and bottom of the slope adjacent to the public sidewalks, streets, or pathways. **(E)**

52. Tree Removal Permit: In accordance with COMC Chapter 2, Title X (Ord. 201), Permittee may be required to obtain a permit for removal of any existing tree(s). Contact the Public Works Department at (408) 586-2600 to obtain the requirements and forms. **(E)**

53. Underground Service Alert (USA): Permittee shall call Underground Service Alert (U.S.A.) at (800) 642-2444, 48 hrs prior to construction for location of utilities. **(E)**

54. Mailboxes: Prior to installation of mailboxes, Permittee shall obtain approval from the US Postal Services and submit documentation to the City for review. Structures to protect mailboxes may be required as a result of the Building, Engineering and Planning Divisions review. **(E)**

55. Construction Storm Water Quality: Permittee shall comply with the requirements of the National Pollution Elimination Discharge System (NPDES) permit as administered by the California State Water Resources Control Board (State Board) and the San Francisco Bay Regional Water Quality Control Board (Regional Board). Prior to the issuance of any building, demolition, or grading permit, Permittee shall submit an Erosion and Sediment Control Plan (Erosion Control Plan) as a part of the improvement plan submittal. The erosion control plan shall show all construction best management practices (BMPs) and shall comply with the requirements of the NPDES, the Municipal Regional Permit Order R2-2009-0074 (MRP), and the City's stormwater and urban runoff pollution control standards and guidelines (City's Clean Water Program). Permittee shall ensure that all contractors and sub-contractors install and regularly maintain all construction BMPs as required by the approved erosion control plan, the COMC, and the City's Clean Water Program. **(E)**

56. Construction General Permit Compliance: Permittee shall comply with the requirements of the Construction General Permit as administered by the State and Regional Boards. Permittee shall obtain a Construction Activities Storm Water General Permit (State Permit) from the State Board. Prior to any construction activities and prior to the issuance of any building, demolition, or grading permit, Permittee shall submit:

    a. a complete Storm Water Pollution Prevention Plan (SWPPP) with the project Waste Discharge Identification Number (WDID) displayed on the cover,
    b. a copy of the approved Notice of Intent (NOI) from the State Board, and
    c. an erosion control plan and a site monitoring plan meeting the satisfaction of the City Engineer.

    Permittee shall ensure that all contractors and sub-contractors install and regularly maintain all storm water quality control measures as required by the approved SWPPP, the approved erosion control plan, the COMC, and the City's Clean Water Program.

    Prior to final occupancy of any residential unit, Permittee shall submit an approved Notice of Termination (NOT). For phased occupancy, Permittee shall submit a Change of Information (COI) or an NOT approved by the State Board that removes each phase of occupancy from the boundaries of the State Permit prior to the issuance of occupancy for that phase. Contact the State and Regional Boards for questions regarding your specific project. For general information, contact the City of Milpitas Engineering Division at (408) 586-3329. **(E)**

57. Post-Construction Storm Water Quality: Permittee shall comply with the requirements of the MRP for post-construction storm water treatment (provision C.3 regarding new development and redevelopment requirements for regulated projects) and the City's Clean Water Program. Permittee shall submit a final, certified storm water quality control plan (SWCP), a SWCP sheet, and a post-construction BMP operations and maintenance plan (O&M) in accordance with the City's Clean Water Program and meeting the satisfaction of the City Engineer. **(E)**

58. Storm Water Quality Control Plan (SWCP): Prior to final map approval or any building permit issuance, Permittee shall submit a separate final or amended existing SWCP that incorporates post-construction BMPs for the treatment of storm water run off from all areas of the parcel~~s~~. The SWCP shall incorporate source control, site design, and storm water treatment consistent with the MRP requirements and the City's Clean Water Program.

a. The SWCP shall comply with all "Model Conditions of Approval for Stormwater Quality" as shown in the Stormwater Section of the Engineering Plans and Map Procedures and Guidelines, dated July 15, 2010 and are hereby incorporated as conditions of project approval.

b. The final SWCP shall be certified by a third party reviewer from the MRP approved list of certifiers. The third party reviewer shall certify that the SWCP complies with the MRP requirements. A list of qualified reviewers can be found at the Santa Clara Valley Urban Runoff Pollution Prevention Plan (SCVRPPP) website (http://www.scvurppp-w2k.com/)

c. O&M Plan: The final SWCP shall include an Operation and Maintenance (O&M) Plan, acceptable to the City Engineer, describing the operation and maintenance procedures needed to insure that storm water treatment measures continue to work as intended and do not create a nuisance (including vector control). The plan shall include all BMP details, a location map, a maintenance schedule, and inspection and reporting templates. The treatment measures shall be maintained for the life of the project. The storm water control operation and maintenance plan shall include the Permittee's signed statement accepting responsibility for maintenance until the responsibility is legally transferred.

d. O&M Agreement: Prior to final occupancy, Permittee shall execute and record an O&M Agreement with the City for the operation, maintenance, and annual inspection of the C.3 treatment facilities. Permittee shall submit documentation of inspection and maintenance to the City's Utility Section annually for reporting to the Regional Board.

e. Permittee shall include language in the approved CC&R providing the City with an annual inspection report in conformance with the approved O&M plan and agreement. If the City does not receive the report, the City will conduct the field inspection and report for the site and the applicant and its successor shall be responsible to pay all associated costs.

f. Format: The SWCP shall comply with the City's Standard SWCP formatting policy.

g. All permit applications shall be consistent with the applicant's final Storm Water Control Plan and approved special conditions, and shall include drawings and specifications necessary to implement all measures described in the approved Plan. Onsite improvement plans shall show the details and methods of construction for site design features, pervious pavements, self-retaining areas, treatment BMPs, permanent source control BMPs, and other features that control storm water flow and potential storm water pollutants. Site design shall limit directly connected impervious areas. Any changes to the final Storm Water Control Plan shall require Site & Architectural ("S" Zone) Amendment application review.

h. Storm Water Control Plan Sheet: A plan sheet shall be included in the offsite and onsite improvement plans for Storm Water Control. The sheet will show and label all drainage areas, treatment measures, drainage flow lines, high points, and low points. Each treatment measure shall have an independent drainage area which shall be designated. The sheet will provide sections and details for grading, drainage, and treatment measures. The sheet will include a table correlating the drainage areas to the treatment measures and summarizing the treatment provided.

i. Storm Water Control Inspection: Prior to initial acceptance of public improvements or initial occupancy for private improvements, the Third Party Certifier of the SWCP shall submit post-construction certification verifying that the post-construction BMPs have been installed correctly and are functioning properly. **(E)**

59. Utility Protection: All existing public utilities shall be protected in place and if necessary relocated as approved by the City Engineer. No permanent structure is permitted within City easements and no trees or deep-rooted shrubs are permitted within City utility easements, where the easement is located within landscape areas. **(E)**

60. Utility Capacity: The issuance of building permits to implement this land use development will be suspended if necessary to stay within (1) available water supplies, or (2) the safe or allocated capacity at the San Jose/Santa Clara Water Pollution Control Plant, and will remain suspended until water and sewage capacity are available. No vested right to the issuance of a Building Permit is acquired by the approval of this land development. The foregoing provisions are a material (demand/supply) condition to this approval. **(E)**

61. Utility Studies: Prior to final map recordation, Permittee shall submit and obtain approval from the City Engineer of the water, sewer, and storm drainage studies for this development. These studies shall identify the development's effect on the City's present Master Plans and the impact of this development on the trunk lines. If the results of the study indicate that this development contributes to the over-capacity of the trunk line, it is anticipated that the developer will be required to mitigate the overflow or shortage by construction of a parallel line or pay a mitigation charge, if acceptable, to the satisfaction of the City Engineer. **(E)**

62. Utility Modeling: Hydraulic modeling is required to verify the capacity of the adjacent water and sewer system piping and determine points of connection. Permittee shall authorize the City to proceed with hydraulic modeling and the costs of the modeling shall be charged to Applicant's PJ Account**. (E)**

63. Sanitary Sewer Discharge: Prior to any discharge into the sanitary sewer system, Permittee shall obtain all required industrial wastewater discharge approvals from San Jose/Santa Clara Water Pollution Control Plant (WPCP) by calling WPCP at (408) 277-2755. **(E)**

64. Landscaping Ordinance 238: In accordance with the provisions of Chapter 5, Title VIII (Ordinance 238) of the COMC for new or rehabilitated landscaping areas equaling 2500 square feet or greater, the applicant shall:

a. Provide separate water meters for domestic water service & irrigation service.
b. Provide separate domestic meters for each proposed use (Residential, Food Services, Commercial/Office).
c. Comply with all the requirements of Ordinance 238.
d. Submit two sets of landscape and irrigation improvement plans to the Building Division with the building permit plan check package. Prior to any building permit issuance, Approval from the Land Development Section of the Engineering Division is required prior to any building permit issuance, and submittal of the Certificate of Substantial Completion is required prior to final occupancy inspection. (E)

Contact the Land Development Section of the Engineering Division at (408) 586-3329 for information on the submittal requirements and approval process. **(E)**

65. Solid Waste Handling Plan (Report): Prior to Final Map approval or any building permit issuance, Permittee shall submit a final Solid Waste Handling Plan that incorporates the following solid waste handling requirements and meeting the satisfaction of the City Engineer. The proposed plan submitted with the Site Development Permit has been conceptually approved but a final submittal is required.

a. A description of the Solid Waste Services required for the development per the Development Guidelines for Solid Waste Services (Development Guidelines). The description shall include sizing calculations, type of service (front load bins, roll-off compactors, etc.), size of bins, and level of service (e.g. number of pickups per week).
b. A description of the Solid Waste Operation at ultimate build out and for each phase of the development.
c. A detail of the solid waste enclosure designed per the Development Guidelines for Solid Waste Services to house all service described above and all necessary equipment. The enclosure design shall provide adequate access for the solid waste truck, and allocate enough space for the solid waste truck operation without impacting the proposed private street. The access to the location and size of the enclosure shall be designed to the City Engineer's satisfaction and shown on the plans prior to any building permit issuance.
d. A solid waste handling plan sheet shall be incorporated in the site improvement plan set containing the enclosure detail, a sizing table, a service table, a description of the solid waste operations, and truck turning templates for collection vehicles.
e. The enclosure drains shall discharge to the sanitary sewer line. Storm drain inlets shall be located at least 25 feet away from enclosures to prevent accidental spills from entering storm drains. Enclosures are not permitted within public utility easements.
f. The Homeowners Association shall be responsible for solid waste handling. The Solid Waste Handling Plan shall include detailed, step-by-step instructions describing the management of solid waste from generation to disposal. The plan shall demonstrate how recycling and waste will be separately handled and maintained.
g. Permittee shall complete the construction of the new trash enclosure to serve the Project prior to issuance of the First Certificate of Occupancy. **(E)**

66. Solid Waste Management: Per Chapter 200, Solid Waste Management, V-200-3.10, *General Requirement*, Permittee shall not keep or accumulate, or permit to be kept or accumulated, any solid waste of any kind and is responsible for proper keeping, accumulating and delivery of solid waste. In addition, according to V-200-3.20 *Owner Responsible for Solid Waste, Recyclables, and Yard Waste*, Permittee shall subscribe to and pay for solid waste services rendered. Prior to issuance of any certificate of occupancy, Permittee shall provide evidence to the City that a sufficient level of trash and recycling service has been secured using a Service Agreement with Republic Services (formally BFI). After Permittee has full occupancy, Permittee shall contact the Republic Services commercial representative to review the adequacy of the solid waste level of services. If services are determined to be inadequate, Permittee shall increase the service to the level determined by the evaluation. **(E)**

67. Recycling Report, Part I: Prior to demolition permit issuance, Permittee's contractor shall submit Part I of a Recycling Report on business letterhead to the Building Division, for forwarding to the Engineering Section. This initial report shall be approved by the City's Utility Engineering and Solid Waste Section (Utility Section) prior to demolition permit issuance. The report shall describe the following resource recovery activities:

a. What materials will be salvaged?
b. How materials will be processed during demolition?
c. Intended locations or businesses for reuse or recycling.

d. Quantity estimates in tons (both recyclable and for landfill disposal). Estimates for recycling and disposal tonnage amounts by material type shall be included as separate items in all reports to the Building Division before demolition begins.

Permittee's contractor shall make every effort to salvage materials for reuse and recycling. **(E)**

68. Recycling Report, Part II: Prior to final approval of the demolition permit or any building permit issuance, Permittee shall submit Part II of the Recycling Report to the Building Division for forwarding to the Utility Section in order to confirm the information described on Part I of the Recycling Report, especially materials generated and actual quantities of recycled materials. Part II of the Recycling Report shall be supported by copies of weight tags and receipts of "end dumps." Actual reuse, recycling, and disposal tonnage amounts (and estimates for "end dumps") shall be submitted to the Building Division for approval by the Utility Section prior to inspection by the Building Division. **(E)**

69. Demolished Material Removal: All demolished materials including, but not limited to, broken concrete, asphalt paving, pipe, vegetation, excess earth, building debris, and other unsuitable materials, etc., shall be removed from the job site for recycling or disposal by Permittee's contractor, to the satisfaction of the City Engineer. Permittee's contractor shall, to the maximum extent possible, reuse any useful construction materials generated during the demolition and construction of the site. Permittee's contractor shall recycle all building and paving materials including, but not limited to roofing materials, wood, drywall, metals, and miscellaneous and composite materials, aggregate base material, asphalt, and concrete. Permittee's contractor shall perform all recycling and/or disposal by removal from the job site. **(E)**

(P) = Planning
(B) = Building
(E) = Engineering
(F) = Fire Prevention
(CA) = City Attorney

MILPITAS PLANNING COMMISSION STAFF REPORT

October 22, 2014

APPLICATION: **South Main Senior Lifestyles – TP14-0001, SD14-0006, DB14-0001**
A request for a Site Development Permit, Vesting Minor Tentative Map, and Density Bonus for the construction of Phase 1 of a senior assisted living and congregate care facility including a new 5-story residential building with 199 rental units (including 10 very low-income units) and associated site improvements.

RECOMMENDATION: **Staff recommends that the Planning Commission:**
Adopt Resolution No. 14-033 recommending the City Council approve Vesting Minor Tentative Map No. TP14-0001, Site Development Permit No. SD14-0006, and Density Bonus No. DB14-0001 for the construction of Phase 1 of a senior assisted living and congregate care facility including a new 5-story residential building with 199 rental units (including 10 very low-income units) and associated site improvements.

LOCATION:

Address/APN:	1504-1620 South Main Street, APNs 086-22-027, -028, -047, -048
Area of City:	Midtown Specific Plan Area

PEOPLE:

Project Applicant:	Joseph Callahan, South Main Senior Lifestyles, LLC
Consultant(s):	James Burns, Collaborative Design Architects
Property/Business Owner:	City of Milpitas Housing Authority
Project Planner:	Shaunn Mendrin, Senior Planner

LAND USE:

General Plan Designation:	Multi-Family Residential, Very High Density
Zoning District:	Multi-Family Residential, Very High Density (R4)
Overlay District:	TOD Overlay (TOD), Site and Architectural Overlay (-S)

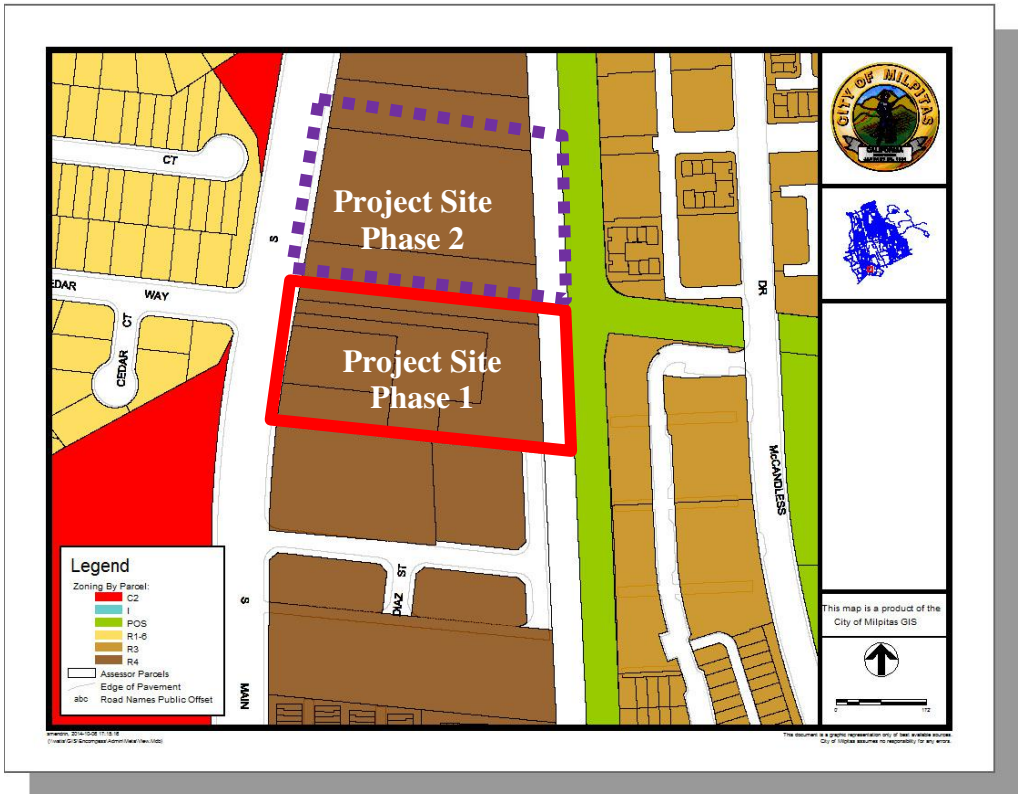
ENVIRONMENTAL: A finding is proposed that this project is within the program of the Midtown Specific Plan EIR and no further action is required.

EXECUTIVE SUMMARY

This project includes the Phase 1 construction of a four-story, 220,187 square foot senior assisted living and congregate care facility with a total of 199 rental units. Ten units will be provided at below market rate and available to very low income senior households over 62 years old. A below-grade parking structure will provide parking for the residents, guests and employees. A Vesting Minor Tentative Map is proposed to create three lots; two lots will be dedicated for public right-of-way and the remaining lot will accommodate construction of the facility. Site improvements include complete street improvements along South Main Street consistent with the Midtown Specific Plan; construction of two new public streets to be maintained by the applicant;

and on-site landscape, utility and infrastructure improvements. A second phase with 190 units will be proposed in the future.

Map 1
Project Location



Map 2
Project Site

BACKGROUND

History

The Milpitas Redevelopment Agency and South Main Senior Lifestyles, LLC, a California limited liability company entered into a Disposition and Development Agreement dated August 18, 2009, which was amended on October 18, 2009. The Initial Agreement provided for the disposition of approximately 5.94 gross acres located at 1504-1620 South Main Street ("the Property") to the applicant for a two-phased senior congregate care and assisted living facility. The Property was previously entitled for development in accordance with a set of entitlements approved by the City Council pursuant to Resolution No. 08-004 on February 5, 2008, which included, Site Development Permit (SZ2007-18), Conditional Use Permit (UP2007-15), Density Bonus (DB08-0001) and Vesting Tentative Map (MI2007-2).

However, the initial project has become financially unfeasible. The dissolution of redevelopment agencies, downturn in the economy, more stringent debt and equity underwriting requirements which make borrowing money more difficult for the applicant, and 80% AMI (Area Median Income) congregate care/assisted living units which are not marketable have factored into the delay. The applicant has now submitted a revised project proposal for consideration.

The Milpitas Housing Authority (MHA) as the housing successor to the dissolved Redevelopment Agency, now owns the Property and has the statutory authority to assume and amend the Initial Agreement to implement the Revised Project on the Property. On October 1 2013, the MHA Board held a study session on the Revised Project and associated amendments to the Initial Agreement. The MHA directed Staff to proceed with the negotiation and draft amendment to the Initial Agreement and return to the MHA Board on November 19, 2013 for review and consideration of a First Amended and Restated Disposition and Development Agreement to amend the Initial Agreement. The MHA approved the First Amended and Restated Disposition and Development Agreement on November 19, 2013, allowing the project to move forward for entitlement consideration.

The Application

The following is a summary of the applicant's request:

- *Site Development Permit:* To evaluate the site layout, architecture, massing, landscaping and other improvements for the project.
- *Minor Tentative Map:* To create three lots for the construction of the facility and public streets.
- *Density Bonus:* To increase the allowable density from 181 rental units to 199 rental units.

PROJECT DESCRIPTION

Overview

The project includes the construction of 199 rental units located in a four-story, 220,000 square foot building. The project is a senior retirement community that will provide congregate care assisted living services. The project will be developed over time in phases. This phase 1 development will provide ten units at below-market rental rates for occupancy by very low income senior households and 189 units at market rental rates. All units will be designed to be

accessible to the disabled and licensed for assisted living, allowing congregate care and enabling residents to age in place.

Location and Context

The property is located at 1504-1620 South Main Street along the eastern side of the street, near the intersection with Cedar Way. The gross land area of the entire site is approximately 5.9 acres. Although the first phase will only include development of approximately 3.02 acres. The first phase includes the subdivision of two parcels for public streets and one parcel for the development. The property is located within the Midtown Specific Plan Area. The property is currently vacant and is adjacent to other residential, light industrial and commercial uses. The Union Pacific Railroad tracks are located to the east of the site. Vicinity and location maps of the subject site location are included on the previous page.

PROJECT ANALYSIS

General Plan and Zoning Conformance and Density Bonus

The project site has a General Plan land use designation of Multi-Family Residential, Very High Density and is zoned R-4, TOD, Multi-Family Residential, Very High Density with a Transit Oriented Development Overlay. These designations allow up to 60 units per acre, however, the applicant is also requesting a 20% density bonus based on State Density Law when a development provides 5% of affordable units for occupancy of very low-income senior households. Based on the provision of R-4 Zoning, the site would be allowed up to 181 units at 60 units per acre at 3.02 acres. Application of the Density Bonus for Affordable Housing of 20% allows an additional 36 units for a total 217 units allowed on the site. As part of the Density Bonus an applicant is allowed up to three concessions based on the percentage and affordability of housing provided. Based on the proposed project, the applicant will be allowed one concession, see the Site and Architectural Design Section for further clarification.

The project is consistent with the General Plan designation and zoning district because the applicant is proposing a senior residential project of 199 units with 10 units targeted to households in the very low-income category. This is a permitted use in the R4 district with the application of the State Density Bonus of 20%.

Climate Action Plan Conformance

The project will be constructed with energy and water conservation measures as required by the State of California CalGreen building code requirements. The project type, size, location and density are also conducive to reducing vehicle trips and low trip generation. The project will also include shuttle service to the future BART station. Best management constructions practices will also be utilized to further reduce construction emissions. Overall, the project is consistent with the Climate Action Plan.

Development Standards

The table below demonstrates how the project is consistent with the development standards of the R-4, TOD, Multi-Family Residential, Very High Density with a Transit Oriented Development Overlay. The project is consistent with the development standards required for the R4 Zoning District. The project meets the minimum setback requirements for all sides of the building; and also meets the height requirement. The project, with density bonus, is also

consistent with the density of 60 units per acre since the bonus units are not included in the calculation. Table 1 below shows conformance with development standards.

Table 1:
Summary of Development Standards

	Standard	Proposed	Complies?
Setbacks (Minimum)			
Front	12 feet	10 feet	Yes*
Street Side	12 feet	10 feet	Yes*
Interior	10 feet	20 feet	Yes
Rear	10 feet	40 feet	Yes
Density (Maximum)	60/acre	66/acre with State Density Bonus	Yes
Building Height (Maximum)	75 feet	68 feet	Yes
*Concession as per Density Bonus for Affordable Housing			

Site & Architectural Design

The project is designed in a modern and contemporary style given the unique operational aspects of the facility and site constraints. The project is designed as a single-structure with internal courtyards, atop a below grade parking structure. The building itself is designed in sections of recessed and protruding elements that will provide depth and interest along the large facades. All units have balconies that will further add depth to the recessed elements. The base of the building is comprised of masonry, glass block and stucco, and hardie-plank siding depending on the facade. The primary building materials are stucco and hardie-plank siding. The recessed elements and combination of materials will provide a richness to help break the mass of the building and provide interest (see Attachments B and D).

The site is compromised by a large PG&E utility easement running through the site, roughly along Cedar Way. Design standards require certain setbacks from this easement and have resulted in a somewhat flat façade. The architect alleviated this situation by designing the recessed elements to turn inward, towards the building, rather than outward into the easement. The roof system is comprised of a hip and flat roof comprised of simulated slate tile. Overall, staff supports the architectural design.

Density Bonus Concession

Density Bonus for Affordable Housing allows a developer to request concessions/incentives from the City's Zoning code based on the affordability of the development this project will be allowed one concession (see Attachment E). The applicant has submitted a project description and request for an incentive/concession from Section XI-10-11-5.d.i (TOD-R4: Front and Street Side Setbacks) of the Zoning Code to allow a front and street setback of 10 feet.

While the above concession must be considered by the City per State Law and the Zoning Code, this type of deviation is common for larger residential in-fill developments. The requested incentive is to allow a 10 foot setback instead of the 12 foot minimum. Typically in the R4 base zoning the front and street side setbacks are a range of 10-12 feet. The current site zoning is restrictive in that it has minimum of 12 feet due to the TOD Overlay. Although the Planning Commission and City Council has to grant the incentive, the proposed 10 feet is within the range allowed in the base zone of R4.

Landscaping & Open Space Design

Landscape and open design largely consists of streetscape design along Main Street, Cedar Way, Costas Street and the pedestrian EVA. The project also includes internal courtyards, and landscaping along the base of the building.

Main Street will be designed consistent with the Midtown Design Standards and South Main Plan Line Study. The streetscape will match and be consistent with the completed portions of South Main Street including Scarlet Oak street trees, shrubs and groundcover, completed street improvements including landscaped median with Princeton Gingko as the primary tree.

Cedar Way, Costas Street and the EVA will include Frontier Elm as the street tree. The EVA will be designed as pedestrian paseo and will include stamped concrete paving, vine plantings along the building and lighting. The internal courtyards will be also be landscaped with Japanese Maples in movable pots since these active areas will be utilized for different activities. The project also includes landscaped bio-treatment areas to treat stormwater runoff prior to entering the public storm drain system. The applicant will be entering into a Maintenance Agreement to maintain the Cedar Way and Costa Street extensions and associated improvements subject to approval by the City Council. The Maintenance Agreement is currently being negotiated and finalized and will be attached to the report to City Council.

Urgency Ordinance (240.2) Exception Request

On August 26, 2014, the City Council adopted Urgency Ordinance No. 240.2 which implemented water use restrictions. Specifically as it relates to this project, the Urgency Ordinance prohibited the construction of new pools (5.03) and the use of potable water for the installation of new landscape unless it is served by Reclaimed Water (5.07). Section 5.08 of the Urgency Ordinance allows the City Council to grant exceptions as needed. The subject site is not located in an area where reclaimed water is available for use and therefore they must use potable water for all on-site irrigation. The proposed project is for senior housing and the proposed pool will provide means for low impact exercise for the residents. Since potable water is the only source for irrigation and the pool will provide opportunity for low impact exercise for the residents of the new community and staff supports the exemption request.

Parking

The parking requirements for the project have been based on the similar types of projects constructed for congregate care and assisted living. The City's Zoning Ordinance and parking requirements do not specify congregate care and assisted living facilities. Section XI-10-53.09(A)(2) states as follows:

> *Uses not specified. In the case of a use not specifically mentioned in Table 53.09-1, Number of Parking Spaces Required, or elsewhere in this Chapter, the requirements for off-street*

parking facilities shall be determined by the Planning Commission through the Interpretation process, in accordance with Section 61, Interpretation, of this Chapter, based on uses which create similar demands for off-street parking spaces. The Planning Commission may draw upon the experience of other local cities to make their decision.

The applicant has provided information and evidence to support an overall parking ratio of 0.7 spaces per unit will be adequate. (Attachment D) This number exceeds the spaces recommended by the Institute of Traffic Engineers (ITE) Parking Generation, 4th edition, which indicates a maximum peak parking demand of roughly 0.5 spaces per unit for these types of facilities. Given the majority of the residents do not drive, and rely on assistance, this ratio seems acceptable.

The facility will contain 199 units, including 15 studios, 106 one-bedroom, and 78 two-bedroom units for a total of 277 beds and employ 65 people. For comparison use, the City of Santa Clara uses the following ratio for similar uses:

Convalescent Homes, Rest Homes, Nursing Homes, Sanitarium, Etc. One space for every four beds plus one space for each two employees (other than the staff doctors) plus one space for each doctor assigned to the staff, but in no case less than one space per seven hundred fifty (750) square feet of gross floor area.

Based on the bed and employee calculation only, using this similar factor, the facility would only require 69 parking spaces (277/4) for the units, and 33 for the employees (65/2) for a total of 102 spaces. The applicant is proposing 144 parking spaces in the below grade parking structure. These parking spaces are allocated as follows:

129 Congregate Care Units = 91 spaces (0.7 per unit)
70 Assisted Living Units = 0 spaces (based on assisted living resident not driving)
65 employees = 30-35 spaces (depending on peak employee times)
Guest parking = 18-23 spaces
Total = 144 spaces

Based on the evidence in the record, staff supports the methodology used to determine project requirements for congregate care and assisted living facility. It should be noted that the construction of Cedar Way and extension of Costas Street will result in additional 35 on-street parking spaces that can be used by the public and guests of the facility. These spaces are not included in the above calculation. Staff recommends the Planning Commission make the interpretation of use and approve the project based on the assumptions and methodology used for determining parking requirements.

Access & Circulation

Primary access to the site will be provided by extension of Cedar Way as a public street into the site. Cedar Way will be designed with a turning lane/turnout to provide access to the building so vehicles can pull into and under the porte cohcere while allowing traffic flow to continue along Cedar Way. Costas Street will also be extended as a public street along the rear property line and connect to Cedar Way. All public streets will contain completed improvements included sidewalks and bicycle lanes. The EVA along the west side of the building will provided pedestrian and bicycle access only. Access to the parking garage and is provided from Costas Street at the rear of the building. The primary area for trash pick-up and service to the building is also provided from Costas Street. Some special design features atypical of City standards have

been incorporated into both Cedar Way and Costas Street. For this reason, the applicant has agreed to maintain these portions of the public street to be negotiated and considered by the City Council.

FINDINGS FOR APPROVAL (OR DENIAL)

A finding is a statement of fact relating to the information that the Planning Commission has considered in making a decision. Findings shall identify the rationale behind the decision to take a certain action.

Minor Tentative Map Findings (Section XI-1-20.01)

1. *The tentative subdivision map is consistent with the Milpitas General Plan.*

The project is consistent with this finding because the proposed Minor Vesting Tentative Map will create three parcels which conforms the R4 Zoning District, and to the development standards of the General Plan. As discussed in detail above, the proposed project type, density and size are all consistent with the General Plan Land Use designation.

Site Development Permit (Section XI-10-57-03-1(F))

2. *The layout of the site and design of the proposed buildings, structures and landscaping are compatible and aesthetically harmonious with adjacent and surrounding development.*

The project is consistent with this finding because the project is well designed and conforms to the development regulations of the zoning district and General Plan. The project is designed to create two new public streets to extend the circulation network in the vicinity of the project site which will increase compatibility. The building is well designed and includes varied materials with a richness and detail that will complement surrounding development. Further, the completion of street improvements along South Main Street will be help improve access around the site and implement the Specific Plan.

3. *The project is consistent with the Milpitas Zoning Ordinance.*

The project is consistent with this finding because the project conforms to the development standards and requirements of the R4, Multi-Family Residential zoning district; the use is allowed by the Zoning District, and the project complies with other aspects of the Zoning Ordinance, such as the Density Bonus Ordinance by providing ten very low-income units.

The project conforms to the development standards required in the R4 and TOD Overlay Districts. The table below demonstrates how the Project is consistent with these development standards.

Summary of Development Standards

	Standard	Proposed	Complies?
Setbacks (Minimum)			
Front	12 feet	10 feet	Yes*
Street Side	12 feet	10 feet	Yes*
Interior	10 feet	20 feet	Yes
Rear	10 feet	40 feet	Yes
Density (Maximum)	60/acre	66/acre with State Density Bonus	Yes
Building Height (Maximum)	75 feet	68 feet	Yes
*Incentive as per Density Bonus for Affordable Housing			

4. *The project is consistent with the Milpitas General Plan.*

The project is consistent with this finding because of the reasons previously stated.

5. *The project is consistent with the Midtown Specific Plan.*

The project is consistent with this finding because development capacity in the Midtown Specific Plan Area still exists, and the area has not reached full build out as envisioned in the Specific Plan. There are 5,228 residential units planned for the area, and 2,312 have been constructed and/or permitted. Specifically, of the 1,680 residential units planned for the South Main Street/Abel area, 1,270 have been constructed and/or permitted leaving development capacity for 410 units. Access and circulation to the project site are consistent with the vision to complete the street network with the infrastructure and utility capacity. The project will be built in accordance with the development standards and design guidelines of the Midtown Specific Plan.

Density Bonus for Affordable Housing Developments (Section XI-10-55-15-D)

1. *Determination of Maximum Allowable Densities. The maximum allowable base density specified in the General Plan, including any other permitted increases to density.*

The base R-4 Zoning would allow up to 181 units at 60 units per acre at 3.02 acres and the application of the Density Bonus of 20% allows an additional 36 units for a total 217 units allowed on the site. The proposed project includes 199 dwelling units, which is within the allowable density with the application of the Density Bonus for Affordable Housing.

2. *Unit Type and Location. All affordable units shall be reasonably dispersed throughout the project, shall contain on average the same number of bedrooms as the non-affordable units in the project, and shall be comparable with the non-affordable units in terms of appearance, materials and finished quality. The Planning Commission may recommend to the City Council and/or Redevelopment Agency modifying the requirements as to unit*

size or type, if it is found that such a modification would better serve the affordable housing need of Milpitas.

The affordable units will be dispersed throughout the project and subject to review and approval by the Planning Director and Principal Housing Officer as contained in the proposed Conditions of Approval.

3. *Agreement. Prior to final building inspection and occupancy for a project containing affordable units, the applicant shall execute and record at the Santa Clara County Recorder's Office the City's Agreement Imposing Restrictions on Real Property, which Agreement shall explain the affordability requirements. The agreement shall be approved by the Milpitas City Attorney prior to recordation.*

The applicant has entered into a Disposition of Development Agreement (DDA) with the City (Housing Authority and City Council) and it was amended on November 19, 2013. The Amended DDA will serve to satisfy this requirement by imposing restrictions on the real property. In addition, the Conditions of Approval for this project will also be required to be recorded against the property. The Amended DDA may be found at the following link: http://www.ci.milpitas.ca.gov/_pdfs/council/2013/111913/item_ha3a.pdf

4. *Retaining Affordability. A developer shall agree to, and the City shall insure continued affordability of, all lower- or very low-income density bonus units for thirty (30) years or a longer period of time, if required by the construction or mortgage financing assistance program, mortgage insurance program, or rental subsidy program. If the City does not grant at least one (1) additional concession or incentive, in addition to a density bonus as specified in Section XI-10-54.15(E), Density Bonus Conditions, of this Chapter, the developer shall agree to, and the City shall ensure continued affordability for a minimum of ten (10) years of all lower or very low-income housing units receiving a density bonus.*

The designated affordable units will be required to remain in place for a minimum of 30 years as stated in the Conditions of Approval. One concession is allowed for the development which results in a decreased setback for the front and street side setbacks allowing 10 feet where 12 is required.

Urgency Ordinance (240.2) Exception

The proposed project includes a new pool and landscaping with irrigation by potable water. The project site is not located adjacent to Reclaimed water making connection infeasible. All new developments are required to install landscaping as per the Zoning Code and all landscaping shall be irrigated. The proposed pool will provide an amenity for the Senior Housing Development which will provide opportunity for low impact exercise for residents.

ENVIRONMENTAL REVIEW

A Program Environmental Impact Report (the "EIR") was prepared and certified (SCH#2000092027) for the Midtown Specific Plan on March 19, 2002. The EIR assumed development of this property for residential uses similar to the proposed project.

No new environmental document is required pursuant to CEQA in connection with this project and development of the Property in accordance with the adopted Disposition and Development Agreement. Government Code Section 65457 (CEQA Guidelines Section 15182) provides a statutory exemption for residential projects that are consistent with a specific plan for which an EIR was certified after January 1, 1980. Additionally, CEQA Guidelines Section 15168(c)(2) provides that, if the project is within the scope of the Midtown Specific Plan EIR, no new environmental document is required so long as no new effects could occur or no new mitigation measures are required.

There are no substantial changes in the project or in the circumstances in which the project will be undertaken that are different from those reviewed in the Midtown Specific Plan EIR, nor does new information show that any additional environmental impacts will occur. The applicant submitted a Traffic Impact Analysis prepared by TJKM Transportation Consultants, and dated May 13, 2014 shows that the project will generate less peak hour traffic than the development assumed on the site in the Midtown Specific Plan EIR and substantially less peak hour traffic than previously approved development on the site, resulting in substantially equivalent or lower air quality and greenhouse gas impacts. Development capacity in the Midtown Specific Plan Area also still exists, and the area has not reached full build out. There are 5,228 residential units planned for the entire Midtown area, and 2,312 have been constructed and/or permitted. Specifically, of the 1,680 residential units planned for the South Main Street/Abel area, 1,270 have been constructed and/or permitted, leaving capacity for an additional 410 units. Access and circulation to the area remain the same as envisioned in the EIR, as well as infrastructure and utility capacity. The project will be built in accordance with the development standards and design guidelines of the Midtown Specific Plan, and South Main Street Plan Line Study. Mitigation measures required as part of the Midtown Specific Plan EIR are hereby incorporated by reference and apply to the Amended DDA. The Revised Project is therefore statutorily exempt from CEQA as provided in Guidelines Section 15182 because no new effects could occur, no new mitigation measures are required, and the project is within the scope of the Midtown Specific Plan EIR. Hence, no new environmental document is required.

PUBLIC COMMENT/OUTREACH

Staff provided public notice the application in accordance with City and State public noticing requirements. At the time of writing this report, there have been no inquiries from the public. A notice was published in the Milpitas Post on October 10, 2014. In addition, 63 notices were sent to owners and occupants within 300 feet of the project site. A public notice was also provided on the project site, on the City's Website, www.ci.milpitas.ca.gov, and posted at City Hall.

CONCLUSION

In summary, staff is recommending approval of this project based on its conformance with the General Plan and Zoning Ordinance; and its purpose to provide a senior congregate care and assisted living facility with ten units allocated to the very low-income group. The project meets

the standards and requirements of the City's development criteria and has illustrated that parking ratio of 0.7 per unit will be sufficient to provide adequate resident, employee and guest parking.

RECOMMENDATION

STAFF RECOMMENDS THAT the Planning Commission:

1. Conduct Public Hearing;
2. Adopt Resolution No. 14-033 recommending that the City Council approve Vesting Minor Tentative Map No. TP14-0001, Site Development Permit No. SD14-0006, and Density Bonus No. DB14-0001 for the construction of Phase 1 of a senior assisted living and congregate care facility including a new 5-story residential building with 199 rental units (including 10 extremely low-income units) and associated site improvements.

~~ATTACHMENTS~~

~~A. Resolution 14-033~~
~~B. Site Development Plans~~
~~C. Vesting Minor Tentative Map~~
~~D. Applicant's Statement on Parking Requirements~~
~~E. Project Description and Density Bonus Concession~~

M E M O R A N D U M

Department of Planning and Neighborhood Services

To: Planning Commission

From: Shaunn Mendrin, Senior Planner

Subject: **Clarifications & Corrections – Senior Lifestyles (Item #2)**

Date: October 22, 2014

Staff revised Attachment A for the Senior Lifestyles project to provide some additional clarification in the Findings and the Conditions of Approval. Specifically, the changes address the following items:

- The project description in the beginning of the resolution was changed to note that the proposed building is 4 stories. The additional level is underground for parking.
- Some additional language was added to the findings citing CEQA and also the Traffic and Noise Studies that were completed for the project and incorporated into the Resolution by reference.
- The rear setback for the building along Costa Street is actually 0 feet at the narrowest point with about 20 feet for the average on Costa frontage. Staff has changed the rear setback to a street side setback and included in the requested incentive.
- Section 5(2) - The reference to the Redevelopment Authority was changed to Housing Authority.
- COA 19- The Park fee was recalculated using a population density based on senior housing product, similar to what was applied to the Devries Senior Housing development.
- COA 22 – Additional language regarding the sound wall on the east side of the property to set the maximum height to 8 feet and to require it be removed when the adjacent commercial development redevelops to a compatible use.
- COA 23 – The requirement of additional landscaping has been removed.
- COA 26(i) – Clarification regarding the dedication of right of way has been added.
- COA 28 – Additional language regarding the extent of line to be replaced and ability for reimbursement has been added.
- COA 37(ix) – Clarification has been added regarding treatment of the biofiltration area on the west side of Cedar Avenue when Phase II redevelops.
- COA 51- The maximum slope was changed to 3:1.
- COA 71 and beyond – These COAs were renumbered due a typo.
- COA 65 – Clarification regarding the Solid Waste Handling Plan was added.

DRAFT MEETING MINUTES

MILPITAS PLANNING COMMISSION
Milpitas City Hall, Council Chambers
455 E. Calaveras Blvd., Milpitas, CA

Wednesday, October 22, 2014

I. PLEDGE OF ALLEGIANCE

Chair Mandal called the meeting to order at 7:00 P.M. and led the Pledge of Allegiance.

II. ROLL CALL/ SEATING OF ALTERNATE

Commissioners

Present: Chair Sudhir Mandal, Commissioners Gurdev Sandhu, John Luk, Rajeev Madnawat, Garry Barbadillo

Absent: Vice Chair Ciardella, Commissioners Morris and Lien

Staff: Steven McHarris, Johnny Phan, Shaunn Mendrin, Lisa Costa Sanders

III. PUBLIC FORUM

Chair Mandal invited members of the audience to address the Commission and there were no speakers.

IV. APPROVAL OF MEETING MINUTES

Chair Mandal called for approval of the September 24, 2014 meeting minutes of the Planning Commission.

Motion to approve Planning Commission meeting minutes as submitted.

Motion/Second: Commissioner Sandhu/Commissioner Luk

AYES: 5

NOES: 0

ABSTAIN: 0

V. ANNOUNCEMENTS

No announcements

VI. CONFLICT OF INTEREST

Assistant City Attorney Johnny Phan asked if any member of the Commission had any personal or financial conflict of interest related to any of the items on the agenda.

There were no reported conflicts.

VII. APPROVAL OF AGENDA

Chair Mandal asked if staff or Commissioners had changes to the agenda.

Motion to approve the October 22, 2014 agenda as submitted.

Motion/Second: Commissioner Sandhu/Commissioner Madnawat

AYES: 5

NOES: 0

VIII. CONSENT CALENDAR

NO ITEMS

IX. PUBLIC HEARING

IX-1 **ST ELIZABETH CHURCH EXPANSION – 750 Sequoia Drive – UA14-0004, SD14-0010:** A request for a Conditional Use Permit Amendment and a Site Development Permit for the construction of a new 8,300 square foot ministry building. The project is categorically exempt from further environmental review pursuant to Section 15301 (Existing Facilities) of the California Environmental Quality Act (CEQA).

Senior Planner Shaunn Mendrin provided a PowerPoint presentation and reviewed the project.

Chair Mandal asked if the existing trash enclosure is adjacent to a resident's backyard and Mr. Mendrin said that it is next to a single family rear yard. Chair Mandal asked if the enclosure can be moved and Mr. Mendrin said staff can work with the applicant to determine if the existing enclosure can be relocated to an alternate location.

Commissioner Madnawat asked if there is a minimum parking requirement for churches and Planning Director Steven McHarris said the parking is based on the number of seats and square footage and referenced a table on page 7 of the staff report. Commissioner Madnawat asked if the church would still be in compliance after the extension and Mr. Mendrin answered yes.

Chair Mandal asked the applicant about the noise and number of attendees at church events and Reverend Lee, the pastor at the church, stated that special events typically take place indoors with the doors closed, but that they have a festival once a year that takes place outside from 9:00 am to 5:00 pm and that a permit is obtained from the City due to the noise ordinance. He added that they also have one annual evening procession on the parking lot with service indoors.

Chair Mandal said he was contacted by a concerned resident about the number of cars on the streets in the neighborhood and asked if any steps are being taken by the church, such as encouraging parishioners to carpool. Reverend Lee said the church has no formal program but does have plenty of parking available, they encourage parishioners to park on the property, and they have a parking lot team to coordinate traffic for Easter and Christmas when there are more attendees. Chair Mandal encouraged him to speak with resident to hear their concerns.

Commissioner Madnawat asked if the church expansion will increase the number of members and Reverend Lee said it would not. He said the problem is lack of space and that the new building will allow them to dedicate the church for worship only with other space for choir and other groups. Commissioner Madnawat feels having volunteers direct traffic to the parking lot may remedy some of the concerns of the neighbors.

Commissioner Madnawat asked if the trash enclosure location is constrained by the existing parking lot and architect Christopher Clancy said they are rebuilding the enclosure to current City standards at its existing location, which has been in the same location for 40 years with no complaints from residents.

Commissioner Barbadillo asked if Condition of Approval #17 was a staff recommendation, and Mr. Mendrin said that it was added after a comment from a neighbor regarding the noise. Commissioner Barbadillo said if the church is abiding by the noise ordinance then they should be allowed to have the doors open and suggested

removing this condition.

Chair Mandal requested that the church encourage carpooling and also look into the possibility of relocating the existing trash enclosure.

Chair Mandal opened the public hearing.

Mr. Cosgrove said he has lived on Grand Teton for 26 years and that the quality of life in the neighborhood has deteriorated due to the many cars parked on his street. He said he cannot leave on a weekend and have a spot to return to on any weekend night. He added that the church is loud and he has to close his windows in the summer.

Mr. Plotkin said he has lived on Grand Teton for 31 years and lives across the street from the church. He said it has become very busy with a lot of festivals, not one or two a year as the church claims, with traffic and cars. He said the church has added speakers on the outside of the church, for the overflow of attendees, and they are on all of the time. He feels the streets should have red curbing to prevent parking in front of fire hydrants, which is a constant issue, and the neighbors should have a contact person to call when there are issues during events.

Motion to close the public hearing.

Motion/Second: Commissioner Sandhu/Commissioner Madnawat

AYES: 5

NOES: 0

Chair Mandal asked staff if there are speakers outside the building and Mr. Mendrin replied that he did not know of any but that there should not be. Mr. McHarris added that he was not aware of a speaker system being permitted and the commission may add a condition of approval requiring the exterior speaker system be removed.

Commissioner Madnawat requested that staff look into the outside speakers and suggested a six month review of the parking situation along with an added condition for a flagger to direct cars to the parking lot. He also felt it was important to provide contact information for residents and that the information be posted during large events.

Chair Mandal suggested restrictions on the speakers/sound system, a parking management program with volunteers to redirect cars to the parking lot, and that church management and City staff review an alternate location for the trash enclosure, moving it away from the residential property line, unless it is not feasible due to security or safety issues.

Motion to adopt Resolution No. 14-034 approving Conditional Use Permit Amendment No. UA14-0004 and Site Development Permit No. SD14-0010 for the construction of a new 8,300 square foot ministry building with the addition of conditions to provide parking management, review the possibility of relocating the trash enclosure, conduct community outreach program with the residents and provide contact information, place restrictions on the sound system, and return six months after the building is completed to review the parking impact.

Motion/Second: Commissioner Sandhu/Commissioner Madnawat

AYES: 5

NOES: 0

ABSTAIN: 0

IX-2 **SOUTH MAIN SENIOR LIFESTYLES – 1504-1620 South Main Street – TP14-0001, SD14-0006, DB14-0001:** A request for a Site Development Permit and Vesting Minor Tentative Map and Density Bonus for the construction of Phase I of a senior congregate care and assisted living facility including a new four-story residential building with 199 rental units and associated site improvements. A CEQA finding is proposed that this project is within the program of the Midtown Specific Plan EIR and no further action is required.

Senior Planner Shaunn Mendrin presented a PowerPoint presentation and reviewed the project.

Commissioner Madnawat asked about the formula for calculating concessions and Mr. Mendrin said there is a set criteria in state law which is also incorporated into the zoning code. He also asked about parking and Mr. Mendrin said they referred to ITE parking standards which evaluates similar types of uses and averages parking demand and explained that the parking demand for congregate care will be less than for a typical multi-family housing project. He added that there is also a parking garage with 144 parking spaces available.

Chair Mandal asked if there will be a preference for Milpitas residents and Principal Housing Planner Felix Reliford said that the City Council adopted a resolution about eight years ago stating that affordable housing units in Milpitas are given first preference to Milpitas residents.

Commissioner Madnawat inquired about the cost of rent, and Joseph Callahan of South Main Senior Lifestyles said there in no standard rental cost and the prices vary per individual. He said prices are occupancy cost plus services, from minimal to assisted living with additional services, the number of meals provided, care by maintenance staff etc.

Chair Mandal opened the public hearing and there were no speakers.

Motion to close the public hearing.

Motion/Second: Commissioner Sandhu/Commissioner Luk

AYES: 5

NOES: 0

Commissioner Madnawat believes the traffic impact will be minimal and that this project provides a substantial benefit to the community.

Commissioner Barbadillo would like the developer to ensure that the housing and care costs are affordable, that Milpitas seniors are a priority at this project, and if possible he would like to see the developer increase the number of affordable units.

Motion to adopt Resolution No. 14-033 recommending the City Council approve Vesting Minor Tentative Map No. TP14-0001, Site Development Permit No. SD14-0006, and Density Bonus No. DB14-0001 for the construction of Phase 1 of a senior assisted living and congregate care facility including a new four-story residential

building with 199 rental units (including 10 very low-income units) and associated site improvements.

Motion/Second: Commissioner Sandhu/Commissioner Luk

AYES: 5

NOES: 0

ABSTAIN: 0

IX-3 **iSTAR CALIFORNIA CIRCLE – 1210 California Circle – GP14-0003, ZA14-0010, SD14-0013, EA14-0006, MT14-0001**: A request for a General Plan Amendment, Zoning Amendment, Site Development Permit, and Major Tentative Map for a land use change from Industrial Park to Multi-Family Residential to construct up to 144 residential units and associated site improvements. A Mitigated Negative Declaration has been prepared and circulated for this project.

Contract Planner Lisa Costa Sanders presented a PowerPoint presentation and reviewed the project.

Chair Mandal commented that there is only one exit for the project with a second for emergency vehicle access and asked if it is possible to have another added. Director McHarris said that, because of the curve of California Circle and site distance parameters, an additional ingress/egress cannot safely be added, but that the project will operate safely for the number of units proposed for the site. He also said that when the BAPS site north of the project is developed in the future, the two properties may connect providing additional access.

Chair Mandal asked about the park area in the center of the project and if it is sufficient for the size of the project and the number of homes and Mr. McHarris said that the space does satisfy City criteria. He added that the applicant proposed the private park areas and will also be required to pay a park in lieu fee that will satisfy all park requirements.

Chair Mandal asked what the assurance is that the architectural changes will be done and Ms. Costa Sanders said this is listed as a condition of approval that must be met prior to issuance of a building permit.

Commissioner Madnawat mentioned the Trumark project, which staff recommended to the Planning Commission not to approve, and asked for the difference. Mr. McHarris said the proposed project is consistent with past City Council direction and most recent action with the Trumark project for conversion of Industrial to Residential land use pertaining to properties along the east side of California Circle.

Commissioner Barbadillo asked about the Trumark development on the north side of the project and Mr. McHarris said there are 85 single family detached homes. Commissioner Barbadillo inquired about two new hotels expected in that area and Mr. McHarris confirmed that entitlement applications are currently being processed for two hotels in the immediate vicinity.

Chair Mandal asked who will maintain the parks and Ms. Costa Sanders said that both open spaces on the site will be private spaces for the benefit of the residents of this development and maintained by the Home Owners Association.

Harry Burrows of HB Consulting Group said he is assisting the applicant process the

project and reviewed a PowerPoint presentation describing the project and its benefits to the City. In regards to the park space, he believes that between the two locations there is adequate space to serve the site and he spoke about trail connectivity with his project and other trails in the surrounding area. Mr. Burrows then introduced Erich Stiger of iStar Financial who spoke about his company and the history of the project site.

Chair Mandal commented that staff is recommending architectural changes and asked Mr. Burrows if the changes are going to happen and Mr. Burrows said they are committed to working with staff to make architectural revisions that they are satisfied with, and their effort is to create a project that is good for the city.

Chair Mandal asked if there are any design changes that can be made to expand the park space and mentioned unused space in the park in the center of the project, and Mr. Burrows said that the area adjacent to the park is part of the storm water treatment area and although it will be open space it is not advisable to use for a recreation area. He added that they are providing a significant amount of trails within the project and that along the northern boundary of the project, in the greenbelt corridor, they will include fitness stations and some park functions that one would see in a traditional park, and that in essence it acts as a long, linear park. He believes that, between the greenbelt area, the area in the middle, and the small park area at the southeast corner, the project is well-parked.

Chair Mandal is concerned with parking, and said the parking design may be sufficient for standard parking but asked about overflow of cars on the streets. Mr. Burrows said they have provided adequate parking, each unit has a two car garage, and they have provided a significant amount of guest parking on the site as well. He thinks residents will understand that they will need to use their garages for parking and not for storage. Chair Mandal asked Assistant City Attorney Johnny Phan if the HOA CCRs can include a rule that garages be used for parking and not storage and Mr. Phan said he wasn't aware of any legal prohibition to include that but would need to look into it further. Chair Mandal said if it is legal then it should be considered in the CCRs.

Commissioner Barbadillo asked why there is a need to increase the height limit and Jill Williams, Principal with KTGY Group, replied that it is about design and creating extra ceiling height, larger windows and an open feeling within the homes.

Commissioner Barbadillo asked about community outreach and if the applicant contacted the school district, and Mr. Burrows said that there have been no meetings held with the school district and it is his understanding that school capacity is not an issue with this project.

Commissioner Madnawat asked for the locations of the two upcoming hotels and Mr. McHarris reviewed the locations on a map. He said his understanding is that the council has said that housing is acceptable on the east side but to keep the west side for commercial development, which Mr. McHarris said is correct.

Chair Mandal opened the public hearing

Dave Makower, a resident of the project area, believes the student generation is understated and feels the development will add more students to schools that are severely overcrowded. He said the new school is needed for the students they already have, not increased students. He also stated that the project attempts to cram as many units as possible into a small space.

Jill Kaufman, a resident at California Landing Villas across the creek from the development, spoke in support of the project and is pleased to have a new development making the west side habitable and appealing.

Bob Nunez, who also lives at California Landing Villas, spoke in support of the project but also thinks the City should stop converting commercial properties to residential because of overcrowding in schools and that the city will not be able to provide adequate infrastructure and public safety. He feels it is important to develop the west side and replace the old buildings that have been there for so many years.

Motion to close the public hearing.

Motion/Second: Commissioner Madnawat/Commissioner Sandhu

AYES: 5

NOES: 0

Commissioner Madnawat said he voted against the Trumark Waterstone project because he is not convinced that there are schools for these disconnected areas. He said schools are at capacity and the new school is not going to help this area. His theory is that because staff is so easy on land use conversions, property prices have gone through the roof and nobody finds it suitable to develop commercial projects. However, now there are two proposed commercial projects for the area and he is willing to wait two or three years to see if more good commercial projects come into the area. He added that once you convert to residential you can never change it back and for that reason he wants to propose a motion to deny the project.

Motion to adopt a resolution recommending to the City Council to deny the general plan amendment for conversion from industrial to residential.

Motion/Second: Commissioner Madnawat/Commissioner Barbadillo

AYES: 3

NOES: 2 Mandal, Luk

ABSTAIN: 0

X. NEW BUSINESS

NO ITEMS

XI. ADJOURNMENT

The meeting was adjourned at 9:45 PM to the next meeting of November 12, 2014.

Motion to adjourn to the next meeting.

Motion/Second: Commissioner Sandhu/Commissioner Luk

AYES: 5

NOES: 0

ABSENT: 3

Meeting Minutes submitted by
Planning Secretary Elia Escobar

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CALLAHAN
PROPERTY
COMPANY

5674 Stoneridge Dr.
Suite 212
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October 29, 2014

Mr. Steve McHarris
Planning & Neighborhood Services Director
City of Milpitas
455 E. Calaveras Blvd.
Milpitas, CA 95035-5411

Re: South Main Senior Lifestyles LLC, Vesting Minor Tentative Map No. TP14-0001, Site Development Permit No. SD14-0006, Density Bonus No. DB14-0001-Park-In-Lieu Fees

Dear Mr. McHarris,

We appreciate the extent and professionalism of the staff presentation of our phase I project at the City Planning Commission 10/22/14 public hearing. Due to the comprehensiveness of the staff's report, our prepared presentation (which was longer and more detailed) was unnecessary. Thus, this enabled us to focus on responding to questions from the commissioners that arose as a result of their review of the project Resolution and Shaunn's presentation. All in all, it was a very productive and informative effort. We also appreciate the effort of the staff to mitigate the park and rec fee as presented in the Resolution which had the effect of reducing it from $2.555 million to $1.325 million. This reduction was based on the park and rec fee paid by the De Vries senior apartment project located on North Main Street across from the City's main library. However, we believe the nature of projected occupancies in SMSL's phase I project, i.e., congregate care and assisted living residents with likely average ages of approximately 87 years with limited mobility, versus De Vries senior independent living occupancies, warrants further consideration by the City.

The following are some thoughts on the justification for this request:

- Basis for Fee Calculation Versus Private Open Space Provided in the SMSL Phase I Project. We understand the City standard for the provision of park space in a residential project is 3.5 acres per 1000 residents. We understand that the City standard for senior occupancies is an average of 1.39 residents per unit (per the De Vries Project). On this basis a projection of 277 residents on our phase I project was projected. Thus, this level of occupancy for SMSL resulted in a park requirement of .97 acres. Due to the age and mobility issues of SMSL's residents the SMSL project design incorporates .79 acres of private open space in the form of unit patios and courtyards located within the structure to provide accessible open space for the residents. The open space is designed with flexibility allowing a variety of outdoor activities to occur. Additionally, we provide extensive indoor common areas and amenities, including an indoor pool for recreational and therapeutic use. As explained in detail in Attachment 1, in light of the age and limited mobility of the project's residents, the project's extensive interior common areas and amenities and the activities and programs to be provided on-site, this level of private open space is more than sufficient to meet resident needs and there will be no demand placed on City parks by the project.

- Heritage Estates Senior Retirement Community, East Stanley Blvd, Livermore, California. Over the more than 10 years some of the SMSL's members have been involved in the ownership and operation of the Heritage Estates senior project in Livermore we've learned a great deal about the effect of its design features on the long term occupancy of residents in that project. It is a 246,000 sf two and three story, Type V construction, rental, mixed income, age restricted (62 years), 250-unit senior housing project. There are approximately 74,000 sf of common areas serving the residents including two commercial kitchens and related dining rooms. It provides 60 assisted living, handicapped accessible units in the two story element of the project and 190 congregate care units in the three story element of it, only 10% of which are handicapped accessible. It provides 161 at grade parking spaces and has 87 FTE employment. The average age of residents

at original occupancy between 2004-2006 was 81 years. Over time it has increased to the point where it is currently 87 years. We have experienced average annual turnover of units in the project of 28% per year. This is due to several factors, death being one of them as well as resident need for higher levels of care, i.e., Alzheimer/dementia, skilled nursing, etc. However, higher level of care also includes congregate residents needing accessible occupancies, but not assisted living services. The occupancy currently (August, 2014) is 1.13 occupants per occupied unit; and averaged 1.11 occupants/occupied unit during calendar year 2013. All one bedrooms only have one occupant/unit while only approximately 50% of the 2 bedroom units have double occupancies. Additionally, Type V construction limits assisted living occupancies to the first two floors of the habitable structure. This has been also an important turnover factor due to the limited number of handicap accessible units provided in the congregate portion of the Heritage facility. This type of turnover is particularly onerous for the resident and their families because it requires physical relocation, sometimes to facilities out of the local area.

- South Main Senior Lifestyle, Phase I, Unique Project Design, Age in Place Occupancies.

  The Heritage Estates project, while very successful, reflects a typical rental senior housing industry approach to the design and construction of these facilities. SMSL's experience and research into industry trends and social demographic trends indicates that a different approach to the design, construction, and operation of senior facilities to minimize resident turnover and facilitate their ability to age in place is warranted. For this reason the SMSL project structure is a Type 1B design over a Type 1 subterranean garage structure. It is a rental, mixed income age restricted (62 years) senior housing project. The project is a 221,087 sf four story habitable structure over a 68,355 sf subterranean garage providing 144 parking spaces. There are 199 residential units ranging from studios (15), one bedroom (106), to two bedroom (78). The habitable area includes 150,388 sf for residential units and 69,799 sf for common areas, 100% of all units will be designed and constructed for handicapped occupancies and will also be licensed with the State for assisted living occupancies. The Type 1B design coupled with each unit's accessibility for the habitable areas enables limited mobility assisted living residents to reside on all four

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floors of the project. This unique approach results in construction costs that are at least 75% higher than those associated with the Heritage Estates project and would not be feasible without the City's assistance with SMSL's acquisition of the land.

The demographic projections for the aging of the United States population over the next twenty to twenty-five years are dramatic. This is no less the case in the Bay Area region. In its Projections 2011 ABAG reported that as of 2010 there are roughly 900,000 of the Bay Area regions' 7,400,000 residents aged 75 years or older. The report projects that by 2035 the Bay Area population will be 9,200,000 residents and 2,300,000 of them will be 75 years or older. Trade areas for rental senior housing projects typically provide the majority of senior project residents within ten miles of a project location. There are 1,346,000 people currently living within this distance of the SMSL project location with demographics very similar to those associated with our Livermore project but population density almost three times that of Livermore. The SMSL project proponents believe that the unique characteristics of its proposed project will provide extensive long term community benefits to the residents of the City of Milpitas, but the cost of providing a project with such benefits is high. SMSL would appreciate the City's reconsideration and reevaluation of the park and rec fees calculation owing to the fact that the frail elderly residents of the project will not use the City parks.

In summary, we request the City of Milpitas to re-evaluate the "Park-In-Lieu" Fee. We believe that the comparison to the De Vries Senior Housing Development, while a reasonable comparison to our Phase 2 project, is not a good comparison for SMSL's Phase One project for these reasons:

1. ***The De Vries Senior Housing Development is "independent" senior (i.e. age restricted but have an independent life style). SMSL is assisted congregate with an average age of 87. Many of our residents (in Phase One) are not mobile and hardly any will be using the public park system except on rare occasions. Full services are provided as previously described and the facility is designed so that its residents may age in place. We invite***

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the city staff to visit Heritage Estates so they might have the opportunity to observe the residents' mobility and lifestyle.

2. ***De Vries Senior Housing Development has (or was calculated to have) 1.39 occupants/per occupied unit. SMSL (using Heritage Estates as our model) will have 1.11 occupant/occupied unit for a total occupancy of 210 (not 277) at stabilized occupancy of 95%, resulting in a requirement of .74 acres of required park. SMSL is providing .79 acres of public and private open space. In Livermore for the Heritage Estates Phase One (i.e. assisted congregate phase), the City of Livermore concluded that no park fe was appropriate due to the occupants' mobility and lifestyle, and that the residents were simply not going to be using the parks.***

The De Vries Senior Housing Development is a more reasonable comparison to our Phase 2 project, which will be an "age restricted independent senior" housing project.

On the basis of the information provided in this correspondence, please consider this correspondence South Main Senior Lifestyle LLC's request for the City of Milpitas' waiver of the project's park and rec fee. Thank you for your consideration. We look forward to the opportunity to discuss our project further at 11/18/14 City Council meeting.

Yours Truly,
Joseph W. Callahan Jr.
Managing Member

Cc: Tom Williams
Shaunn Mendrin
SMSL Members

ATTACHMENT 1

SOUTH MAIN SENIOR LIFESTYLES, LLC (SMSL)
PHASE 1: 199 UNIT CONGREGATE CARE AND ASSISTED LIVING COMMUNITY
CITY OF MILPITAS PARK-IN-LIEU FEE
October 29, 2014

Park Usage by SMSL's Phase 1 Residents Will be Rare

The residents of SMSL's Phase 1 congregate care and assisted living (CC/AL) community will not use the public park system in the City of Milpitas to any appreciable degree. A profile of the anticipated characteristics of these residents and the services that the CC/AL community will provide to them explains why.

The residents of SMSL's CC/AL community will be elderly and frail, with limited mobility. At Heritage Estates, the 250-unit CC/AL community developed and owned by some of the principals of SMSL, the average age of the residents is 87 and approximately 25% of the residents receive assistance with the activities of daily living (medication management, help with grooming, dressing, bathing, mobility and other personal care). Few residents drive. Most residents have limited mobility (relying on canes, walkers, wheel chairs or scooters) and many suffer from impaired hearing and/or eyesight. Residents of SMSL's CC/AL community are likely to be at least as old and even more frail than those of Heritage Estates for a couple of reasons:

- Owing to its design, only 60 (24%) of Heritage Estates' 250 units are, and can be, licensed by the State of California to provide assisted living services. In anticipation of the aging of the Milpitas market area's population, 100% of the units at SMSL's CC/AL community will be licensed by the State to provide assisted living services and be accessible to the disabled. Therefore, the percentage of SMSL's residents who are very frail will be significantly greater than that at Heritage Estates.
- The average age of the residents of SMSL's CC/AL community is likely to be even higher than that of Heritage Estates because of the smaller percentage of affordable units in the former. The average age of Heritage Estates' residents includes the very low and low income households who reside in the 103 affordable units (which account for approximately 40% of the units). Because affordable CC/AL units are in very short supply, seniors who meet the income and minimum age requirements move in when they are younger and less frail than market rate residents to secure an affordable unit.

Owing to their age and limited mobility, residents of SMSL's CC/AL community are not likely to venture on their own to parks or other destinations beyond the community. When family and friends come to visit, they will either visit with the resident on-site or take the resident out to a restaurant or event of special interest to the resident.

SMSL's CC/AL community will provide a full range of on-site recreational activities and entertainment for its residents. The community will include approximately 15,000 square feet

of interior common areas and 11,775 square feet of courtyards that will be used for programmed events and activities. Each day will feature an array of activities in which the residents may participate. Examples include Wii, fitness classes (in the fitness facility and indoor pool), assisted walks around the indoor and outdoor common areas, outdoor barbeques, gardening, bingo, pool, board and card games, movies, lectures/seminars, arts/crafts/cooking classes, performances by musicians and other entertainers, and other activities and programs of interest to the residents.

SMSL's CC/AL community will arrange excursions to destinations of interest to its residents. Examples of such outings include visits to the Monterey Bay Aquarium, San Francisco Opera, concerts, major sports events (professional football, baseball, hockey, etc.), local farmer's markets, local theaters and other entertainment venues, restaurants, shopping centers and the like. In Heritage Estates' 10 years of operations to date, its residents have not requested visits to any City of Livermore parks (or any other parks – county, state or federal).

A CC/AL Community Differs Significantly from Age-Restricted Senior Apartments

Age-restricted senior apartments target senior citizens who are able to live independently and wish to live with others of similar age and lifestyle rather than with families with young children, young professionals or other demographics. Almost all residents of senior apartments still drive. Many work, at offices or from home. The units are similar to typical apartment units. Common area amenities usually include a community room, lobby area and outdoor courtyards for resident gatherings. No organized programmed activities, meals, housekeeping, transportation or assisted living services are provided for the residents.

As such, the residents of senior apartments are generally younger and more physically fit and active than residents of a congregate care/assisted living community. Accordingly, two-person households are more common in senior apartments than in CC/AL communities so the average number of occupants per unit is greater in senior apartments than in a CC/AL community. For example, the average number of occupants per unit at the DeVries Senior Apartments in Milpitas is 1.39 residents. At Heritage Estates, the current (August, 2014) average number of residents/occupied unit is 1.13, and averaged 1.12 for January through August 2014 and averaged 1.11 for the calendar year 2013. At a stabilized occupancy of 95% and 1.11 residents per occupied unit, SMSL's CC/AL community would house a total of 210 residents (199 units x .95 occupancy x 1.11 residents per occupied unit).

Revised 10-22-14

RESOLUTION NO. 14-033

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF MILPITAS RECOMMENDING THE CITY COUNCIL APPROVE VESTING MINOR TENTATIVE MAP NO. TP14-0001, SITE DEVELOPMENT PERMIT NO. SD14-0006 AND DENSITY BONUS NO. DB14-0001 FOR THE CONSTRUCTION OF PHASE 1 OF A SENIOR ASSISTED LIVING AND CONGREGATE CARE FACILITY INCLUDING A NEW 4-STORY RESIDENTIAL BUILDING WITH 199 RENTAL UNITS (INCLUDING 10 VERY LOW-INCOME UNITS) AND ASSOCIATED SITE IMPROVEMENTS LOCATED AT 1504-1620 SOUTH MAIN STREET

WHEREAS, on April 22, 2014, an application was submitted by Joseph Callahan, South Main Senior Lifestyles, LLC ("Applicant") at 5674 Stoneridge Drive, Suite 212, Pleasanton, CA 94588 to construct an assisted living and congregate care facility with 199 rental units (including 10 very low-income units) at 1504-1620 South Main Street ("Project"). The property is located within R4, TOD, Multi-Family Residential with Transit Oriented Development Overlay Zoning District (APN: 86-22-027, -028, -046, -047 and -048).

WHEREAS, in March 2002, the City Council of the City of Milpitas approved the Midtown Specific Plan to guide development in the Midtown Area of the City which includes the project site along South Main Street.

WHEREAS, Milpitas City Staff conducted a full analysis of the proposed Project to ensure compliance with the City's General Plan, Midtown Specific Plan, Zoning Code, Engineering Design Requirements and all other applicable laws, regulations and standards, as all further explained in detail in City staff's report to the Planning Commission.

WHEREAS, the Planning Division completed an environmental assessment for the project in accordance with the California Environmental Quality Act (CEQA), and recommends that the Planning Commission determine this project is exempt under CEQA Guidelines Section 15332(Infill Development Project), CEQA Guidelines Section 15182 (Compliance with Specific Plan), and CEQA Guidelines Section 15168 (Program EIR).

WHEREAS, on October 22, 2014 the Planning Commission held a duly noticed public hearing on the subject application, and considered evidence presented by City staff, the applicant, and other interested parties.

NOW THEREFORE, the Planning Commission of the City of Milpitas hereby finds, determines and resolves as follows:

Section 1: The Planning Commission has duly considered the full record before it, which may include but is not limited to such things as the City staff report, testimony by staff and the public, and other materials and evidence submitted or provided to the Planning Commission. Furthermore, the recitals set forth above are found to be true and correct and are incorporated herein by reference.

Section 2: A Program Environmental Impact Report (the "EIR") was prepared and certified (SCH#2000092027) for the Midtown Specific Plan on March 19, 2002. The EIR assumed development of this property for residential uses similar to the proposed Project.

No new environmental document is required pursuant to CEQA in connection with this Project and development of the Property in accordance with the adopted Disposition and Development Agreement. Government Code Section 65457 (CEQA Guidelines Section 15182) provides a statutory exemption for residential projects that are consistent with a specific plan for which an EIR was certified after January 1, 1980. Additionally, CEQA Guidelines Section 15168(c)(2) provides that, if the project is within the scope of the Midtown Specific Plan EIR, no new environmental document is required so long as no new effects could occur or no new mitigation measures are required.

There are no substantial changes in the proposed Project or in the circumstances in which the proposed Project will be undertaken that are different from those reviewed in the Midtown Specific Plan EIR, nor does new information show that any additional environmental impacts will occur. The applicant submitted a Traffic Impact Analysis prepared by TJKM Transportation Consultants, and dated May 13, 2014 (Exhibit 2), which shows that the proposed Project will generate less peak hour traffic than the development assumed on the site in the Midtown Specific Plan EIR and substantially less peak hour traffic than previously approved development on the site, resulting in substantially equivalent or lower air quality and greenhouse gas impacts (Exhibit 3). Further, development capacity in the Midtown Specific Plan Area also still exists, and the area has not reached full build out. There are 5,228 residential units planned for the entire Midtown area, and 2,312 have been constructed and/or permitted. Specifically, of the 1,680 residential units planned for the South Main Street/Abel area, 1,270 have been constructed and/or permitted, leaving capacity for an additional 410 units. Access and circulation to the area remain the same as envisioned in the EIR, as well as infrastructure and utility capacity. The proposed Project will be built in accordance with the development standards and design guidelines of the Midtown Specific Plan, and South Main Street Plan Line Study. Mitigation measures required as part of the Midtown Specific Plan EIR are hereby incorporated by reference and apply to the Amended DDA. The Revised Project is therefore statutorily exempt from CEQA as provided in Guidelines Section 15182. Further, because no new effects could occur, no new mitigation measures are required, and the project is within the scope of the Midtown Specific Plan EIR. Hence, no new environmental document is required as provided in CEQA Guidelines Section 15168 (c)(2).

Section 3: ***Minor Tentative Map Findings (Section XI-1-20.01) - The Planning Commission makes the following findings based on the evidence in the public record in support of Minor Tentative Map No. TP14-0001.***

1. *The tentative subdivision map is consistent with the Milpitas General Plan.*

As explained in detail in the accompanying staff report, the project is consistent with this finding because the proposed Minor Vesting Tentative Map will create three parcels which conforms the R4 Zoning District, and to the development standards of the General Plan. The proposed project

type, density and size are all consistent with the General Plan Land Use designation because the use is permitted, and the project size with density bonus are with the density requirements of the General Plan.

Section 4: ***Site Development Permit (Section XI-10-57-03-1(F)) - The Planning Commission makes the following findings based on the evidence in the public record in support of Site Development Permit No. SD14-0006:***

1. *The layout of the site and design of the proposed buildings, structures and landscaping are compatible and aesthetically harmonious with adjacent and surrounding development.*

The project is consistent with this finding because the project is well designed and conforms to the development regulations of the zoning district and general plan. The projects is designed to create two new public streets to extend the circulation network in the vicinity of the project site which will increase compatibility. The building is well designed and includes varied materials with a richness and detail that will complement surrounding development. Further, the completion of street improvements along South Main Street will be help in the

2. *The project is consistent with the Milpitas Zoning Ordinance.*

The project is consistent with this finding because the project conforms to the development standards and requirements of the R4, Multi-Family Residential zoning district; the use is allowed by the Zoning District, and the project complies with other aspects of the Zoning Ordinance, such as the Density Bonus Ordinance by providing ten very low-income units.

The project conforms to the development standards required in the R4 and TOD Overlay Districts. The table below demonstrates how the Project is consistent with these development standards.

Summary of Development Standards

	Standard	**Proposed**	**Complies?**
Setbacks (Minimum)			
Front	12 feet	10 feet	Yes*
Street Side	12 feet	10 feet	Yes*
Interior	10 feet	20 feet	Yes
Rear (Street Side)	10 feet	20 foot average	Yes*
Density (Maximum)	60/acre	66/acre with density bonus	Yes
Building Height (Maximum)	75 feet	68 feet	Yes
*Incentive as per State Density Bonus			

3. *The project is consistent with the Milpitas General Plan.*

The project is consistent with this finding because of the reasons previously stated.

4. *The project is consistent with the Midtown Specific Plan.*

The project is consistent with this finding because development capacity in the Midtown Specific Plan Area still exists, and the area has not reached full build out as envisioned in the Specific Plan. There are 5,228 residential units planned for the area, and 2,312 have been constructed and/or permitted. Specifically, of the 1,680 residential units planned for the South Main Street/Abel area, 1,270 have been constructed and/or permitted leaving development capacity for 410 units. Access and circulation to the project site are consistent with the vision to complete the street network with the infrastructure and utility capacity. The project will be built in accordance with the development standards and design guidelines of the Midtown Specific Plan.

Section 5: ***Density Bonus for Affordable Housing Developments (Section XI-10-55-15-D)***

1. *Determination of Maximum Allowable Densities. The maximum allowable base density specified in the General Plan, including any other permitted increases to density.*

The base R-4 Zoning would allow up to 181 units at 60 units per acre at 3.02 acres and the application of the Density Bonus of 20% allows an additional 36 units for a total 217 units allowed on the site. The proposed project includes 199 dwelling units, which is within the allowable density with the application of the Density Bonus for Affordable Housing.

2. *Unit Type and Location. All affordable units shall be reasonably dispersed throughout the project, shall contain on average the same number of bedrooms as the non-affordable units in the project, and shall be comparable with the non-affordable units in terms of appearance, materials and finished quality. The Planning Commission may recommend to the City Council and/or Housing Authority modifying the requirements as to unit size or type, if it is found that such a modification would better serve the affordable housing need of Milpitas.*

The affordable units will be dispersed throughout the project and subject to review and approval by the Planning Director and Principal Housing Officer as contained in the Conditions of Approval.

3. *Agreement. Prior to final building inspection and occupancy for a project containing affordable units, the applicant shall execute and record at the Santa Clara County Recorder's Office the City's Agreement Imposing Restrictions on Real Property, which Agreement shall explain the affordability requirements. The agreement shall be approved by the Milpitas City Attorney prior to recordation.*

The applicant has entered into a Disposition of Development Agreement (DDA) with the City (Housing Authority and City Council) and it was amended on November 19, 2013. The Amended DDA requires the applicant to record a Regulatory Agreement that will serve to satisfy this requirement by imposing extremely low-income restrictions on the real property. In addition, the Conditions of Approval for this project will also be required to be recorded against the property. The Amended DDA may be found at the following link: http://www.ci.milpitas.ca.gov/_pdfs/council/2013/111913/item_ha3a.pdf

4. *Retaining Affordability. A developer shall agree to, and the City shall insure continued affordability of, all lower- or very low-income density bonus units for thirty (30) years or a longer period of time, if required by the construction or mortgage financing assistance program, mortgage insurance program, or rental subsidy program. If the City does not grant at least one (1) additional concession or incentive, in addition to a density bonus as specified in Section XI-10-54.15(E), Density Bonus Conditions, of this Chapter, the developer shall agree to, and the City shall ensure continued affordability for a minimum of ten (10) years of all lower or very low-income housing units receiving a density bonus.*

The designated affordable units will be required to remain in place for a minimum of 30 years as stated in the Conditions of Approval and as will be required with a Regulatory Agreement to be recorded over the Project site. One concession is allowed for the development which results in a decreased setback for the front and street side setbacks allowing 10 feet where 12 is required.

Density Bonus Concession

Density Bonus for Affordable Housing allows a developer to request concessions/incentives from the City's Zoning code based on the affordability of the development this project will be allowed one concession. The applicant has submitted a project description and request for an incentive/reduction from Section XI-10-11-5.d.i (TOD-R4: Front and Street Side Setbacks) of the Zoning Code to allow a front and street setback of 10 feet.

While the above concession must be considered by the City per State Law and the Zoning Code, this type of deviation is common for larger residential in-fill developments. The requested incentive is to allow a 10 foot setback instead of the 12 foot minimum. Typically in the R4 base zoning the front and street side setbacks are a range of 10-12 feet. The current site zoning is restrictive in that it has minimum of 12 feet due to the TOD Overlay. The setback along Costa Street should be a minimum of 12 feet, but due to needed facilities such as solid waste, there are portions that are at a zero setback. If you take the average of the building frontage on Costa, the average is 20 feet. Although the Planning Commission and City Council have to grant the incentive, the proposed 10 feet is within the range allowed in the base zone of R4.

Section 6: ***Urgency Ordinance (240.2) Exception***

On August 26, 2014, the City Council adopted Urgency Ordinance No. 240.2 which implemented water use restrictions. Specifically as it relates to this project, the Urgency Ordinance prohibited the construction of new pools (5.03) and the use of potable water for the

installation of new landscape unless it is served by Reclaimed Water (5.07). Section 5.08 of the Urgency Ordinance allows the City Council to grant exceptions as needed. The subject site is not located in an area where reclaimed water is available for use and therefore they must use potable water for all on-site irrigation. The proposed project is for senior housing and the proposed pool will provide means for low impact exercise for the residents. Since potable water is the only source for irrigation and the pool will provide opportunity for low impact exercise for the residents of the new community, the Planning Commission supports the exemption request.

Section 7: The Planning Commission of the City of Milpitas hereby adopts **Resolution No. 14-033 recommending that the City Council approve Vesting Minor Tentative Map No. TP14-0001, Site Development Permit No. SD14-0006, and Density Bonus No. DB14-0001 based on the above Findings and subject to the Conditions of Approval attached hereto as Exhibit 1 incorporated herein.**

PASSED AND ADOPTED at a regular meeting of the Planning Commission of the City of Milpitas on October 22, 2014.

Sudhir Mandal
Chair

TO WIT:

I HEREBY CERTIFY that the following resolution was duly adopted at a regular meeting of the Planning Commission of the City of Milpitas on October 22, 2014 and carried by the following roll call vote:

COMMISSIONER	AYES	NOES	ABSENT	ABSTAIN
Lawrence Ciardella			✓	
John Luk	✓			
Rajeev Madnawat	✓			
Sudhir Mandal	✓			
Demetress Morris			✓	
Gurdev Sandhu	✓			
Garry Barbadillo	✓			

COMMISSIONER	AYES	NOES	ABSENT	ABSTAIN
Hon Lien (alternate)			✓	

EXHIBIT 1

CONDITIONS OF APPROVAL
South Main Senior Lifestyles
Vesting Minor Tentative Map, TP14-0001, and a Site Development Permit, SD14-0006

General Conditions

1. General Compliance. The applicant and owner, including all successors in interest (collectively "Permittee") shall comply with each and every condition set forth in this Permit. This Vesting Minor Tentative Map, TP14-0001, and a Site Development Permit, SD14-0006 ("Permit") shall have no force or effect and no building permit shall be issued unless and until all things required by the below-enumerated precedent conditions have been performed or caused to be performed and this Resolution has been recorded by the Permittee with the Santa Clara County's Recorder Office and a copy shall be provided to the Planning Department. **(P)**

2. Effective Date. Unless there is a timely appeal filed in accordance with the Milpitas Zoning Code, the date of approval of this Permit is the date on which the decision-making body approved this Permit. **(P)**

3. Acceptance of Permit. Should Permittee fail to file a timely appeal within twelve (12) calendar days of the date of approval of this Permit, inaction by Permittee shall be deemed to constitute each of the following:

   a. Acceptance of this Permit by Permittee; and
   b. Agreement by the Permittee to be bound by, comply with, and to do all things required of or by Permittee pursuant to all of the terms, obligations, and conditions of this Permit. **(P)**

4. Permit Expiration. Pursuant to Section XI-10-64-06 of the Milpitas Zoning Code, this Permit shall become null and void if the activity permitted by this Permit is not commenced within two (2) years from the date of approval, or for a project submitted with a tentative map, within the time limits of the approved tentative map. Pursuant to Section XI-10-64.06(B) of the Milpitas Zoning Code, an activity permitted by this Permit shall be deemed to have commenced when the project: **(P)**

   a. Completes a foundation associated with the project; or
   b. Dedicates any land or easement as required from the zoning action; or
   c. Complies with all legal requirements necessary to commence the use, or obtains an occupancy permit, whichever is sooner. **(P)**

5. Time Extension. Pursuant to Section XI-10-64.07 of the Milpitas Zoning Code, unless otherwise provided by State law, Permittee shall have the right to request a one-time extension of the Permit if the request is made in writing to the Planning Division prior to the expiration date of the approval. **(P)**

6. Project Job Account. If Permittee's project job account is at any time delinquent or below the required deposit amount, City will not continue to review or process the application until Permittee's private job account is paid in full and the required deposit has been made. Additionally, prior to the issuance of any building permit or occupancy permit, as applicable, Permittee shall pay in full the project account balance and establish a remaining balance of at least twenty-five percent (25%) of the required initial deposit. **(P)**

7. Notice. Pursuant to California Government Code Section 66020, any protest filed in court relating to the imposition of fees, dedication, reservations, or other exactions to be imposed on the development project shall be filed within ninety (90) days after the date of the adoption of this Resolution. This provision serves as notice from the local agency to the Permittee that the ninety (90) day period in which the applicant may file a protest has begun under California Government Code Section 66020(d)(1). **(P)**

8. Cost and Approval. Permittee shall fully complete and satisfy each and every condition set forth in this Resolution and any other condition applicable to the project to the sole satisfaction of the City. Additionally, Permittee shall be solely responsible and liable for the cost to satisfy each and every condition. Permittee shall pay all required fees and charges to City at the rate in effect at time of building permit issuance, or, the rate in effect when the fees and charges are due and paid in full to City. There is no vesting of any fees or charges with the adoption of this Resolution. **(P)**

9. Conditions. Each and every condition set forth in this Exhibit shall apply to the project and continue to apply to the project so long as the Permittee is operating the project under the permits and approvals in this Resolution. **(P)**

10. Compliance with Laws. The construction, use, and all related activity authorized under this Permit shall comply with all applicable local, state, and federal laws, rules, regulations, guidelines, requirements, and policies. **(CA/P)**

11. Compliance with Midtown Specific Plan Program EIR MMRP (SCH#2000092027): Permittee shall comply with all applicable mitigation measures contained in the Mitigation and Monitoring Reporting Program (MMRP) for the Midtown Specific Plan EIR (City Council Resolution #7150 adopted on March 19, 2002) to the satisfaction of the Planning Director. **(P)**

12. Previous Approvals. Permittee shall abide and continue to comply with all previous City approvals, permits, or requirements relating to the subject property, unless explicitly superseded or revised by this Permit. **(P)**

13. Indemnification. To the fullest extent permitted by law, Permittee shall indemnify, defend with counsel of the City's choosing, and hold harmless City, its City Council, its boards and commissions, officials, officers, employees, and agents from and against any and all claims, demands, obligations, damages, actions, causes of action, suits, losses,

judgments, fines, penalties, liabilities, costs and expenses (including without limitation, attorney's fees, disbursements and court costs) of every kind and nature whatsoever which may arise from or in any manner relate (directly or indirectly) to (i) City's approval of the project, including but not limited to, the approval of the discretionary permits, maps under the Subdivision Map Act, and/or the City's related determinations or actions under the California Environmental Quality Act, and (ii) Permittee's construction, operation, use, or related activity under this Permit. This indemnification shall include, but not be limited to, damages awarded against the City, if any, costs of suit, attorneys' fees, and other expenses incurred in connection with such claim, action, causes of action, suit or proceeding whether incurred by applicant, City, and/or the parties initiating or bringing such proceeding. Permittee shall indemnify the City for all of City's costs, attorneys' fees, and damages which City incurs in enforcing the indemnification provisions set forth in this condition. Permittee shall pay to the City upon demand or, as applicable, to counsel of City's choosing, any amount owed pursuant to the indemnification requirements prescribed in this condition. **(P/CA)**

14. Revocation, Suspension, Modification. This Permit may be suspended, revoked, or modified in accordance with Section XI-10-63.06 of the Milpitas Zoning Code. **(P)**

15. Severability. If any term, provision, or condition of this Permit is held to be illegal or unenforceable by the Court, such term, provision, or condition shall be severed and shall be inoperative, and the remainder of this Permit shall remain operative, binding, and fully enforceable. **(P)**

16. Permittee shall develop the approved project in conformance with the approved plans approved by the Planning Commission on (October 22, 2014), in accordance with these Conditions of Approval.

    Any deviation from the approved site plan, elevations, materials, colors, landscape plan, or other approved submittal shall require that, prior to the issuance of building permits, the Permittee shall submit modified plans and any other applicable materials as required by the City for review and obtain the approval of the Planning Director or Designee. If the Planning Director or designee determines that the deviation is significant, the owner or designee shall be required to apply for review and obtain approval of the Planning Commission or City Council, as applicable, in accordance with the Milpitas Zoning Code. **(P)**

17. Compliance with Fire Department and CA Fire Code. The Project shall comply with the requirements of the Fire Department and the CA Fire Code. Changes to the site plan and/or building(s) requires review and approval by the Fire Department. **(F)**

Project Specific Conditions

18. Density Bonus. The proposed Project shall provide a minimum of 10 very-low (50% AMI) units within the Phase 1 project and the project may have a reduced front and street

side setback of 10 feet per approved concession. The units shall be subject to the following and review and approval by the Planning Director:

a. The 10 units shall be equally disbursed throughout the building.
b. The 10 units shall be restricted to very-low (50% AMI) for a minimum of 30 years or longer as specified in the Disposition of Development Agreement. (P)

19. Park. Prior to any building permit issuance, Permittee shall pay the City park impact fee in the amount of **$1,325,394** based on 199 units per the City's Subdivision Ordinance. This amount is an estimate only and there is no vesting of any fees.

20. Disposition of Development Agreement. Permittee shall comply with all requirements set forth in the First Amended Disposition of Development Agreement (DDA), as may be amended, subject to the review and approval of the Planning Director.

21. Use. The cafeteria located on the ground floor shall be available for staff, residents and their guests only. The cafeteria shall not be open to the public. (P/E)

22. Landscaping. A final landscaping plans shall address the following items and it shall be subject to review and approval by the Planning Director prior to issuance of any building permit or off-site improvement plans (whichever occurs first):

a. All equipment located between the building and back of sidewalk shall be screened fully.
b. Trees proposed on the EVA shall be a species that has a columnar growth pattern and is evergreen, such as a Fern Podocarpus.
c. The sound wall along the railroad corridor shall include climbing vine plantings on both sides of the wall.
d. All street landscaping shall be consistent with the Midtown Specific Plan.
e. The sound wall along the east property line shall be a maximum height of 8 feet and shall be removed when the adjacent nonresidential use changes to a residential or mixed use development. **(P)**

23. Wall replacement along South Main Street. Permittee shall replace the sound walls along South Main Street as indicated in the plans. The walls shall be replaced prior to any occupancy of the Phase I building. Permittee shall provide plans subject to review and approval by the Planning Director. **(P)**

24. Lighting levels/light spill. Permittee shall provide photometric plans for the on-site improvements clearly indicating that the proposed lighting plan does not result in light overspill onto adjacent properties.

25. Written Response to Conditions of Approval and Midtown Specific Plan EIR MMRP: Permittee shall provide a written response with each permit submittal indicating how and where (sheet) each Condition of Approval has been addressed. **(All)**

26. Public Improvements: Prior to final map approval, Permittee shall obtain design approval and bond for all necessary public improvements along S. Main, Cedar Way,

Costa Street, and the public improvements across Phase 2, including but not limited to the following:

i. Midtown Specific Plan: All S. Main Street offsite frontage improvements (Phase 1 and Phase 2) including street lights, sidewalks, tree wells, landscape, bus stops, street furniture, signing, striping, sound walls, and traffic signal shall be constructed per the Midtown Specific Plan and S. Main Street Planline design guidelines and standards in Phase 1 of the project. S. Main Street public ROW dedication shall be provided to the ultimate back of sidewalk (if needed) and a 10' PSUE dedication shall be provided beyond the ultimate back of sidewalk.

ii. Utility Relocation: Underground utilities (such as joint trench conduit, utility boxes, etc.) shall be relocated and adjusted as necessary to accommodate S. Main Street tree well placements per the Midtown Specific Plan and S. Main Street Planline design guidelines.

iii. Main Street Pavement: Phase 1 of the project shall include AC pavement base repairs, micro-surfacing, and pavement restriping the full width of S. Main Street project (Phase 1 and Phase 2) frontage.

iv. Public Streets: Cedar Way and Costa Street shall be public streets. On these public streets, public ROW dedication shall be provided to the ultimate back of sidewalk and a 10'minimum width PSUE dedication shall be provided beyond the ultimate back of sidewalk or additional easement width as required by the City Engineer.

v. Traffic Signal Improvements: A new traffic signal shall be constructed per the Midtown Specific Plan and S. Main Street Plan Line design guidelines and standards to replace the existing traffic signal at S. Main Street/Cedar Way intersection. The traffic signal shall be constructed and in operation prior to issuance of First Certificate of Occupancy (temporary or final).

vi. All public improvements shall be installed and accepted prior to the issuance of the first Certificate of Occupancy (temporary or final).

27. Cedar Way and Costa Street Maintenance; Permittee shall maintain all public improvements along and within Cedar Way and Costa Street. The Parties shall enter into a Maintenance Agreement prior to issuance of any building permit subject to the review and approval of the City Engineer. Maintenance activities will include restoration and capital improvements necessary to meet the City's standard of service. The following levels of service shall be maintained for public improvements:

i. Limits: Cedar Way and Costa Street shall be privately maintained public streets. The limit of private maintenance on Cedar Way shall begin from the back portland concrete valley gutter on the east side of S. Main Street to Costa Street and bordered by back of sidewalks on Cedar Way. The limit of private maintenance on Costa Street shall begin from Cedar Way to the project southerly limit and bordered by the back of sidewalk and railroad soundwall.

ii. Scope: Maintenance of these public streets shall include but not be limited to AC pavement, sidewalk, street lights, storm drain inlets, C.3 Storm Water Treatment areas, railroad sound wall, landscapes, trees, striping and signing.

iii. Maintenance Level: These streets shall be regularly maintained to the following minimal standard levels:

(1) Pavement, sidewalks, landscapes, and storm drain inlets shall be kept free of debris and litter (street sweeping, etc.),
(2) Pavement, sidewalks, street lights, and sound walls shall be kept free of graffiti and private signage,
(3) Pavement Condition Index (PCI) shall be maintained above 70,
(4) Continuous vehicular access shall be maintained on all public streets
(5) Continuous ADA access shall be maintained on sidewalks
(6) Sidewalks shall be kept free of tripping hazards,
(7) Landscaping, trees, and C.3 Storm Water treatment areas shall be irrigated, pruned, and fertilized to maintain healthy growth,
(8) Street lights shall be in a good state of repair to provide nighttime illumination for safe vehicle and pedestrian travel,
(9) All C.3 Storm Water Treatment facilities shall be maintained to comply with all the provisions of the MRP.

iv. Insurance and Indemnity: Permittee shall be required to obtain adequate insurance and indemnify the City and its officers, employees or agents for any acts or omissions arising from or relating to the maintenance activities described in this condition, all subject to Risk Manager review and approval.

28. Sanitary Sewer Replacement: Permittee shall replace approximately 1,250 linear feet of existing 8-inch sewer pipe with 12-inch diameter sewer pipe along S Main Street described as Project 11D in the 2009 Sewer Master Plan. The work extends from approximately 270 linear feet South of the Cedar Way intersection northward and ties into the sewer line replacement previously installed by the Shea Apartment project. Permittee frontage is approximately 850 linear feet. Permittee is eligible for reimbursement and/or fee credit toward the sewer connection fee for up to 400 linear feet of the sewer line replacement based on the City's approved budget for the replacement cost and in accordance with City's Development Fee Ordinance. Prior to approval of the final map, the parties shall enter into a reimbursement and/or fee credit agreement for City Council review and consideration.

29. Storm Drain Replacement: Permittee shall replace the existing Storm Drain line along S. Main Street from the northern limit of Phase 2 to the southern limit of Phase 1 to the nearest manhole.

30. Waterline Installation: Permittee shall install approximately 950 linear feet of public water pipeline around the perimeter of the Phase 1 and Phase 2 sites connecting the public water system in Costa Street with the public water system in South Main Street. Hydraulic modeling is required to confirm the minimum pipeline diameter necessary to meet maximum day demand plus fire flow of 2,500 gallons per minute. There is insufficient space for the proposed public 8 inch water pipeline between the proposed Phase 2 Building foundation and the storm water treatment area along Cedar Way and this pipeline is not allowed.

31. Storm Drain Connection to S. Main: Permittee shall extend the new public storm drain on Costa Street across the Phase 2 property and connect to the public Storm Drain system

on S. Main. Permittee shall submit a revised utility layout for approval by the City Engineer.

32. Easements: Permittee shall dedicate to the City the following easements:

    i. 20' EVA along the South boundary of the property, unless otherwise specified by the Fire Department
    ii. 20' PSUE for the Proposed Storm Drain Main and Water main crossing the Phase 2 property

33. EVA Access: Permittee shall maintain the EVA free of obstructions of any kind. Underground backflow preventers do not meet City Standards. Permittee shall relocate the proposed backflow devices outside of the proposed EVA and submit a detail of the utility box layout on the improvement plans.

34. C.3 Special Project Status: Permittee has requested special project status for this development under the Municipal Regional Permit's (MRP) provisions for a residential development. In order to continue to qualify under this provision, Permittee shall not propose commercial or retail with the Project limits. If commercial or retail operations are proposed, the project must re-apply for Special Project status. Special Project credits shall only be applied after the Permittee has demonstrated that all opportunities for LID treatment have been exhausted or are infeasible. Permittee shall submit a explanation discussing the feasibility of additional LID treatment.

35. Solid Waste Handling: Permittee shall submit a revised solid waste handling plan. The revised solid waste handling operation shall have a flagger present during all collection operations to ensure pedestrian and vehicular safety.

36. City Standards: All design and construction of public and private improvements shall be in compliance with City guidelines and standard drawings.

37. Utilities: Permittee shall comply with all of the following:

    i. Independent Services: Each parcel is required to have independent utility services.
    ii. CDPH Waivers: All utility designs shall be in accordance with City and State requirements. New public water pipelines shall be in compliance with California Department of Public Health Water Works Standards. Waivers will not be granted for new construction. Permittee shall coordinate utility improvements with other surface improvements, such as landscaping and paved surfaces, to ensure that conflicts do not exist.
    iii. SC Zone 1 Water Supply: The Project shall be served by SC Zone 1 water supply. Separate services are required for domestic, irrigation, and fire uses. Permittee is alerted that on-site pumping to upper floors may be required.
    iv. Phase 2: Permittee shall design all utilities in the Costa Street extension around the Phase 2 lot to ensure there is sufficient space for all utilities. Private utilities are not allowed in public streets.

v. Pool Waiver: Due to the drought, the City has adopted water conservation measures. Permittee is required to seek an exception from the City Council to fill swimming pools and fountains and to irrigate landscaping with potable water.
vi. Grease Interceptor: Permittee is advised to relocate the proposed grease waste interceptor away from public dining and/or gathering areas.
vii. Backflow Preventer: Backflow devices are not permitted in below grade vaults and do not meet City standards. Permittee shall use a City Standard backflow device and submit a revised utility plan prior to final map approval or building permit issuance, whichever occurs first.
viii. C.3 Compliance: Permittee is advised that C3/LID compliance requirements are dependent upon whether the dining area is open to the public. Permittee shall revise the Storm Water Control Plan as necessary and shall meet all City and State requirements.
ix. Vehicular Crossing: As part of the design of Phase 2, the Permittee shall revise the biotreatment area along Cedar Way adjacent to the proposed Phase 2 building to allow for pedestrian and vehicle crossings and shall revise the Storm Water Control Plan at that time to account from this revision.

38. Development Fees: Permittee shall submit the following items with the building permit application and any other applicable fees and pay the related estimated fees prior to any building permit issuance:

a. Sewer Needs Questionnaire and/or Industrial Waste Questionnaire
b. Water Service Agreement(s) for water meter(s), detector check(s), and double check detector assembly.
c. Storm water connection fee of $21,562 per acre.
d. Water, sewer and treatment plant fees will be calculated at the time of building plan check submittal.
e. Calaveras Blvd Widening Traffic Impact Fee of $235 per residential unit (in 2009 dollars) prior to building permit issuance. Fee shall be adjusted per ENR index rate at the time of building permit issuance.

Contact the Land Development Section of the Engineering Division at (408) 586-3328 to obtain the form(s). *The above fees are preliminary estimates and subject to change.* There is no vesting of the fees with the adoption of this Resolution. **(E)**

39. Building Permit Automation Fee: Prior to any building permit issuance, Permittee shall pay all applicable development fees, as determined by the City Engineer in accordance with the most current approved fee schedule adopted by the City Council, including but not limited to, connection fees (water, sewer and storm), Transit Area impact fee, plan check and inspection deposit, and 2.5% building permit automation fee as approved by City Council Resolution No. 7590. **(E)**

40. Community Facilities District (CFD) Annexation: Prior to final map approval, Permittee shall submit an executed consent to annex the subject property into CFD 2005-1 and shall

agree to pay the special taxes levied by CFD 2005-1 for the purpose of maintaining the public services. The petition to annex into the CFD shall be finalized concurrently with the final map recordation or prior to any building permit issuance, whichever occurs first. Permittee shall comply with all rules, regulations, policies, and practices established by State Law and by the City with respect to the CFD including, without limitation, the requirements for notice and disclosure to future owners and residents. **(E)**

41. Final Map: Prior to issuance of any building permit, the final map shall be recorded. The final map submittal shall meet the following requirements:

    a. Provide a current title report with your final map submittal, not more than 90 days old.
    b. All final maps shall designate all common lots and easements as lettered lots or lettered easements.
    c. The final map shall clearly delineate the project property line and the County right of way line. County right of way and Project boundary should be contiguous.
    d. All final maps shall be tied to the North America Datum of 1983 (NAD 83), California Coordinate of 1983, zone 3.
    e. Permittee shall dedicate all necessary easements for public utilities, emergency vehicle access, solid waste collection, pedestrian corridors, sidewalks, trails, paths, and public access on the final map for acceptance by the City in compliance with the City's Engineering Guidelines and the approved Tentative Map.
    f. Prior to recordation of any final map, Permittee shall submit to the City a digital copy of the approved final map in AutoCAD and GIS format. **(E)**

42. Property Management Association: Prior to final map approval, Permittee shall establish a Property Management Association. The Property Management Association shall be responsible for the maintenance of the landscaping, walls, buildings, private street lights, common area and private streets and shall have assessment power. The Property Management Association shall manage the onsite water and sewer system and implement the Solid Waste Handling Plan. **(E)**

43. Improvement Plans: Prior to final map approval, Permittee shall obtain design approval and bond for all necessary public improvements, including but not limited to the following:

    a. Removal and installation of new curb, gutter, and sidewalk, median modification or installation, signage and striping, street lights, street trees, fire hydrants, bus stop, and storm, water, and sewer service installation.
    b. All improvements plans shall be prepared using Vertical Datum of 1988 (NAVD 88). The specific city benchmark used for the project shall be indicated on the cover sheet of each improvement plan set.
    c. Plans for all public improvements shall be prepared on Mylar (24"x36" sheets) with City Standard Title Block and developer shall submit a digital copy of the Record Drawings AutoCAD and GIS format upon completion of improvements to the satisfaction of the City Engineer.

d. Permittee shall also execute a secured public improvement agreement. The agreement shall be secured for an amount of 100% of the engineer's estimate of the construction cost for faithful performance and 100% of the engineer's estimate of the construction cost for labor & materials. The public facilities such as water meters, RP backflow preventers, sewer clean outs, etc., shall be placed so access is maintained and kept clear of traffic. **(E)**

44. Initial Acceptance: All improvements must be installed in accordance with the City of Milpitas standard drawing and specification, and shall be constructed to the City Engineer's satisfaction and accepted by the City prior to issuance of any final certificate of occupancy of any unit. **(E)**

45. Utility Undergrounding: Prior to issuance of the first Certificate of Occupancy (temporary or final), Permittee shall underground all existing wires and overhang utilities and remove all related poles within the proposed development and along all street frontages. All proposed utilities within the subdivision shall also be undergrounded. The improvement plans shall show all existing utilities within and bordering the proposed development, and clearly identify the existing PG&E wire towers and state wire voltage. All utility vaults, boxes, cabinets, and pedestals shall be identified and labeled on the improvement plans. Above ground utility facilities shall be underground, relocated, or screened to the satisfaction of the City Engineer and the Planning Director. **(E)**

46. Joint Trench Relocation: The joint trench shall be relocated in the field, if necessary, to accommodate the approved street layout (sidewalks, trees, streetlights, etc.) to the satisfaction of the City Engineer and the Planning Director. All joint trench structures (vaults, boxes, cabinets, etc.) shall be adjusted to the final grade. **(E)**

47. Encroachment Permit: Prior to any work within the public right of way or City easement, Permittee shall obtain an encroachment permit from City of Milpitas Engineering Division. Prior to installing offsite improvements, Permittee shall obtain an encroachment permit from the City of Milpitas and all necessary encroachment permits from other affected agencies and private parties, including but not limited to, Pacific Gas and Electric, SBC, Comcast, Santa Clara Valley Water District, Santa Clara County road and Airport Department, and Santa Clara Valley Transportation Agency (VTA). Copies of any approvals or permits shall be submitted to the City of Milpitas Engineering Division as a part of the encroachment permit review. **(E)**

48. Agency Approval: It is the sole responsibility of Permittee to obtain any necessary encroachment permits from affected agencies and private parties, including but not limited to, Pacific Gas and Electric, SBC, Comcast, Santa Clara Valley Water District and Caltrans. Copies of any approvals or permits must be submitted to the City of Milpitas Engineering Division. **(E)**

49. Construction Schedule: Prior to start of any construction, Permittee shall submit a construction schedule and monitoring plan for City Engineer review and approval. The construction schedule and monitoring plan shall include, but not be limited to,

construction staging area, parking area for the construction workers, personnel parking, temporary construction fencing, and construction information signage and establish a neighborhood hotline to record and respond to neighborhood construction related concerns. Permittee shall coordinate their construction activities with other construction activities in the vicinity of this project. Permittee's contractor is also required to submit updated monthly construction schedules to the City Engineer for the purpose of monitoring construction activities and work progress. **(E)**

50. Demolition: All utilities shall be properly disconnected before the building can be demolished. Show (state) how the water service(s), sewer service(s) and storm service(s) will be disconnected. The water service shall be locked off in the meter box and disconnected or capped at main line in the street if the water meter is not to be used. The sanitary sewer shall be capped at the clean out near the property line or approved location if it is not to be used. The storm drain shall be capped off at a manhole or inlet structure or approved location if it is not to be used. **(E)**

51. Maximum Slopes: All slopes adjacent to public sidewalks and streets shall be designed to a maximum grade of 3:1 slope. The grading design shall also provide a 1' flat bench at the top and bottom of the slope adjacent to the public sidewalks, streets, or pathways. **(E)**

52. Tree Removal Permit: In accordance with COMC Chapter 2, Title X (Ord. 201), Permittee may be required to obtain a permit for removal of any existing tree(s). Contact the Public Works Department at (408) 586-2600 to obtain the requirements and forms. **(E)**

53. Underground Service Alert (USA): Permittee shall call Underground Service Alert (U.S.A.) at (800) 642-2444, 48 hrs prior to construction for location of utilities. **(E)**

54. Mailboxes: Prior to installation of mailboxes, Permittee shall obtain approval from the US Postal Services and submit documentation to the City for review. Structures to protect mailboxes may be required as a result of the Building, Engineering and Planning Divisions review. **(E)**

55. Construction Storm Water Quality: Permittee shall comply with the requirements of the National Pollution Elimination Discharge System (NPDES) permit as administered by the California State Water Resources Control Board (State Board) and the San Francisco Bay Regional Water Quality Control Board (Regional Board). Prior to the issuance of any building, demolition, or grading permit, Permittee shall submit an Erosion and Sediment Control Plan (Erosion Control Plan) as a part of the improvement plan submittal. The erosion control plan shall show all construction best management practices (BMPs) and shall comply with the requirements of the NPDES, the Municipal Regional Permit Order R2-2009-0074 (MRP), and the City's stormwater and urban runoff pollution control standards and guidelines (City's Clean Water Program). Permittee shall ensure that all contractors and sub-contractors install and regularly maintain all construction BMPs as required by the approved erosion control plan, the COMC, and the City's Clean Water Program. **(E)**

56. Construction General Permit Compliance: Permittee shall comply with the requirements of the Construction General Permit as administered by the State and Regional Boards. Permittee shall obtain a Construction Activities Storm Water General Permit (State Permit) from the State Board. Prior to any construction activities and prior to the issuance of any building, demolition, or grading permit, Permittee shall submit:

    a. a complete Storm Water Pollution Prevention Plan (SWPPP) with the project Waste Discharge Identification Number (WDID) displayed on the cover,
    b. a copy of the approved Notice of Intent (NOI) from the State Board, and
    c. an erosion control plan and a site monitoring plan meeting the satisfaction of the City Engineer.

    Permittee shall ensure that all contractors and sub-contractors install and regularly maintain all storm water quality control measures as required by the approved SWPPP, the approved erosion control plan, the COMC, and the City's Clean Water Program.

    Prior to final occupancy of any residential unit, Permittee shall submit an approved Notice of Termination (NOT). For phased occupancy, Permittee shall submit a Change of Information (COI) or an NOT approved by the State Board that removes each phase of occupancy from the boundaries of the State Permit prior to the issuance of occupancy for that phase. Contact the State and Regional Boards for questions regarding your specific project. For general information, contact the City of Milpitas Engineering Division at (408) 586-3329. **(E)**

57. Post-Construction Storm Water Quality: Permittee shall comply with the requirements of the MRP for post-construction storm water treatment (provision C.3 regarding new development and redevelopment requirements for regulated projects) and the City's Clean Water Program. Permittee shall submit a final, certified storm water quality control plan (SWCP), a SWCP sheet, and a post-construction BMP operations and maintenance plan (O&M) in accordance with the City's Clean Water Program and meeting the satisfaction of the City Engineer. **(E)**

58. Storm Water Quality Control Plan (SWCP): Prior to final map approval or any building permit issuance, Permittee shall submit a separate final or amended existing SWCP that incorporates post-construction BMPs for the treatment of storm water run off from all areas of the parcels. The SWCP shall incorporate source control, site design, and storm water treatment consistent with the MRP requirements and the City's Clean Water Program.

    a. The SWCP shall comply with all "Model Conditions of Approval for Stormwater Quality" as shown in the Stormwater Section of the Engineering Plans and Map Procedures and Guidelines, dated July 15, 2010 and are hereby incorporated as conditions of project approval.

b. The final SWCP shall be certified by a third party reviewer from the MRP approved list of certifiers. The third party reviewer shall certify that the SWCP complies with the MRP requirements. A list of qualified reviewers can be found at the Santa Clara Valley Urban Runoff Pollution Prevention Plan (SCVRPPP) website (http://www.scvurppp-w2k.com/)

c. O&M Plan: The final SWCP shall include an Operation and Maintenance (O&M) Plan, acceptable to the City Engineer, describing the operation and maintenance procedures needed to insure that storm water treatment measures continue to work as intended and do not create a nuisance (including vector control). The plan shall include all BMP details, a location map, a maintenance schedule, and inspection and reporting templates. The treatment measures shall be maintained for the life of the project. The storm water control operation and maintenance plan shall include the Permittee's signed statement accepting responsibility for maintenance until the responsibility is legally transferred.

d. O&M Agreement: Prior to final occupancy, Permittee shall execute and record an O&M Agreement with the City for the operation, maintenance, and annual inspection of the C.3 treatment facilities. Permittee shall submit documentation of inspection and maintenance to the City's Utility Section annually for reporting to the Regional Board.

e. Permittee shall include language in the approved CC&R providing the City with an annual inspection report in conformance with the approved O&M plan and agreement. If the City does not receive the report, the City will conduct the field inspection and report for the site and the applicant and its successor shall be responsible to pay all associated costs.

f. Format: The SWCP shall comply with the City's Standard SWCP formatting policy.

g. All permit applications shall be consistent with the applicant's final Storm Water Control Plan and approved special conditions, and shall include drawings and specifications necessary to implement all measures described in the approved Plan. Onsite improvement plans shall show the details and methods of construction for site design features, pervious pavements, self-retaining areas, treatment BMPs, permanent source control BMPs, and other features that control storm water flow and potential storm water pollutants. Site design shall limit directly connected impervious areas. Any changes to the final Storm Water Control Plan shall require Site & Architectural ("S" Zone) Amendment application review.

h. Storm Water Control Plan Sheet: A plan sheet shall be included in the offsite and onsite improvement plans for Storm Water Control. The sheet will show and label all drainage areas, treatment measures, drainage flow lines, high points, and low points. Each treatment measure shall have an independent drainage area which

shall be designated. The sheet will provide sections and details for grading, drainage, and treatment measures. The sheet will include a table correlating the drainage areas to the treatment measures and summarizing the treatment provided.

i. Storm Water Control Inspection: Prior to initial acceptance of public improvements or initial occupancy for private improvements, the Third Party Certifier of the SWCP shall submit post-construction certification verifying that the post-construction BMPs have been installed correctly and are functioning properly. **(E)**

59. Utility Protection: All existing public utilities shall be protected in place and if necessary relocated as approved by the City Engineer. No permanent structure is permitted within City easements and no trees or deep-rooted shrubs are permitted within City utility easements, where the easement is located within landscape areas. **(E)**

60. Utility Capacity: The issuance of building permits to implement this land use development will be suspended if necessary to stay within (1) available water supplies, or (2) the safe or allocated capacity at the San Jose/Santa Clara Water Pollution Control Plant, and will remain suspended until water and sewage capacity are available. No vested right to the issuance of a Building Permit is acquired by the approval of this land development. The foregoing provisions are a material (demand/supply) condition to this approval. **(E)**

61. Utility Studies: Prior to final map recordation, Permittee shall submit and obtain approval from the City Engineer of the water, sewer, and storm drainage studies for this development. These studies shall identify the development's effect on the City's present Master Plans and the impact of this development on the trunk lines. If the results of the study indicate that this development contributes to the over-capacity of the trunk line, it is anticipated that the developer will be required to mitigate the overflow or shortage by construction of a parallel line or pay a mitigation charge, if acceptable, to the satisfaction of the City Engineer. **(E)**

62. Utility Modeling: Hydraulic modeling is required to verify the capacity of the adjacent water and sewer system piping and determine points of connection. Permittee shall authorize the City to proceed with hydraulic modeling and the costs of the modeling shall be charged to Applicant's PJ Account. **(E)**

63. Sanitary Sewer Discharge: Prior to any discharge into the sanitary sewer system, Permittee shall obtain all required industrial wastewater discharge approvals from San Jose/Santa Clara Water Pollution Control Plant (WPCP) by calling WPCP at (408) 277-2755. **(E)**

64. Landscaping Ordinance 238: In accordance with the provisions of Chapter 5, Title VIII (Ordinance 238) of the COMC for new or rehabilitated landscaping areas equaling 2500 square feet or greater, the applicant shall:

a. Provide separate water meters for domestic water service & irrigation service.
b. Provide separate domestic meters for each proposed use (Residential, Food Services, Commercial/Office).
c. Comply with all the requirements of Ordinance 238.
d. Submit two sets of landscape and irrigation improvement plans to the Building Division with the building permit plan check package. Prior to any building permit issuance, Approval from the Land Development Section of the Engineering Division is required prior to any building permit issuance, and submittal of the Certificate of Substantial Completion is required prior to final occupancy inspection. (E)

Contact the Land Development Section of the Engineering Division at (408) 586-3329 for information on the submittal requirements and approval process. **(E)**

65. Solid Waste Handling Plan (Report): Prior to Final Map approval or any building permit issuance, Permittee shall submit a final Solid Waste Handling Plan that incorporates the following solid waste handling requirements and meeting the satisfaction of the City Engineer. The proposed plan submitted with the Site Development Permit has been conceptually approved but a final submittal is required.

a. A description of the Solid Waste Services required for the development per the Development Guidelines for Solid Waste Services (Development Guidelines). The description shall include sizing calculations, type of service (front load bins, roll-off compactors, etc.), size of bins, and level of service (e.g. number of pickups per week).
b. A description of the Solid Waste Operation at ultimate build out and for each phase of the development.
c. A detail of the solid waste enclosure designed per the Development Guidelines for Solid Waste Services to house all service described above and all necessary equipment. The enclosure design shall provide adequate access for the solid waste truck, and allocate enough space for the solid waste truck operation without impacting the proposed private street. The access to the location and size of the enclosure shall be designed to the City Engineer's satisfaction and shown on the plans prior to any building permit issuance.
d. A solid waste handling plan sheet shall be incorporated in the site improvement plan set containing the enclosure detail, a sizing table, a service table, a description of the solid waste operations, and truck turning templates for collection vehicles.
e. The enclosure drains shall discharge to the sanitary sewer line. Storm drain inlets shall be located at least 25 feet away from enclosures to prevent accidental spills from entering storm drains. Enclosures are not permitted within public utility easements.
f. The Homeowners Association shall be responsible for solid waste handling. The Solid Waste Handling Plan shall include detailed, step-by-step instructions describing the management of solid waste from generation to disposal. The plan shall demonstrate how recycling and waste will be separately handled and maintained.
g. Permittee shall complete the construction of the new trash enclosure to serve the Project prior to issuance of the First Certificate of Occupancy. **(E)**

66. Solid Waste Management: Per Chapter 200, Solid Waste Management, V-200-3.10, *General Requirement*, Permittee shall not keep or accumulate, or permit to be kept or accumulated, any solid waste of any kind and is responsible for proper keeping, accumulating and delivery of solid waste. In addition, according to V-200-3.20 *Owner Responsible for Solid Waste, Recyclables, and Yard Waste*, Permittee shall subscribe to and pay for solid waste services rendered. Prior to issuance of any certificate of occupancy, Permittee shall provide evidence to the City that a sufficient level of trash and recycling service has been secured using a Service Agreement with Republic Services (formally BFI). After Permittee has full occupancy, Permittee shall contact the Republic Services commercial representative to review the adequacy of the solid waste level of services. If services are determined to be inadequate, Permittee shall increase the service to the level determined by the evaluation. **(E)**

67. Recycling Report, Part I: Prior to demolition permit issuance, Permittee's contractor shall submit Part I of a Recycling Report on business letterhead to the Building Division, for forwarding to the Engineering Section. This initial report shall be approved by the City's Utility Engineering and Solid Waste Section (Utility Section) prior to demolition permit issuance. The report shall describe the following resource recovery activities:

    a. What materials will be salvaged?
    b. How materials will be processed during demolition?
    c. Intended locations or businesses for reuse or recycling.
    d. Quantity estimates in tons (both recyclable and for landfill disposal). Estimates for recycling and disposal tonnage amounts by material type shall be included as separate items in all reports to the Building Division before demolition begins.

    Permittee's contractor shall make every effort to salvage materials for reuse and recycling. **(E)**

68. Recycling Report, Part II: Prior to final approval of the demolition permit or any building permit issuance, Permittee shall submit Part II of the Recycling Report to the Building Division for forwarding to the Utility Section in order to confirm the information described on Part I of the Recycling Report, especially materials generated and actual quantities of recycled materials. Part II of the Recycling Report shall be supported by copies of weight tags and receipts of "end dumps." Actual reuse, recycling, and disposal tonnage amounts (and estimates for "end dumps") shall be submitted to the Building Division for approval by the Utility Section prior to inspection by the Building Division. **(E)**

69. Demolished Material Removal: All demolished materials including, but not limited to, broken concrete, asphalt paving, pipe, vegetation, excess earth, building debris, and other unsuitable materials, etc., shall be removed from the job site for recycling or disposal by Permittee's contractor, to the satisfaction of the City Engineer. Permittee's contractor shall, to the maximum extent possible, reuse any useful construction materials generated during the demolition and construction of the site. Permittee's contractor shall recycle all building and paving materials including, but not limited to roofing materials, wood,

drywall, metals, and miscellaneous and composite materials, aggregate base material, asphalt, and concrete. Permittee's contractor shall perform all recycling and/or disposal by removal from the job site. **(E)**

(P) = Planning
(B) = Building
(E) = Engineering
(F) = Fire Prevention
(CA) = City Attorney

1F-Exhibit 2

TJKM
Transportation
Consultants

Vision That Moves Your Community

Draft Report

Traffic Impact Analysis for South Main Senior Lifestyles Development

In the City of Milpitas

May 13, 2014

Pleasanton
Fresno
Sacramento
Santa Rosa

TJKM

w.tjkm.com

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Introduction and Summary

Introduction

This report presents the results of TJKM's traffic impact study for the proposed South Main Senior Lifestyles Development in the City of Milpitas. This proposed project, located along South Main Street at Cedar Way, includes the development of a senior housing community to be constructed in two phases, including 129 congregate care dwelling units and 70 assisted living beds under Phase 1, and 190 independent living senior housing units under Phase 2. In addition, the project proposal includes the construction of 141 marked subterranean parking spaces under Phase 1 and 257 marked parking spaces in a four-story, above grade parking structure under Phase 2. Information received from the project applicant indicates that it is expected that 80% of the congregate care residents (103 occupied congregate care units) will own vehicles. Figure 1 illustrates the location of the proposed project and its vicinity. Figure 2 shows the proposed South Main Senior Lifestyles Development site plan.

The purpose of this traffic analysis is to evaluate the potential impact of the proposed project, which consists of 389 senior residential units to be constructed in two phases. This report includes analysis of four study scenarios and eight existing study intersections that would potentially be impacted by proposed project traffic. For the purposes of this analysis, potential traffic operational effects from the project are identified based on established traffic operational thresholds for the Santa Clara County Valley Transportation Authority (VTA) Congestion Management Program (CMP) and the City of Milpitas. For any study intersections exceeding these thresholds, traffic mitigations are then identified and evaluated for the potential to bring overall level of service (LOS) back within acceptable thresholds.

Summary

Project Trip Generation

The proposed 389-unit South Main Senior Lifestyles Development is expected to generate 58 trips during the a.m. peak hour and 89 trips during the p.m. peak hour before applicable trip discounts are applied. Given the location of the project relative to existing VTA light rail, the project is eligible for a 9 percent transit-based trip reduction, which reduces the number of a.m. and p.m. peak hour trips generated to 53 and 81, respectively.

TJKM compared the number of trips generated by the proposed project with a previously entitled residential apartment development at the project site, which was estimated to produce 198 a.m. peak hour trips and 240 p.m. peak hour trips. The current proposed project is expected to generate 71 percent fewer a.m. peak hour trips, and 63 percent fewer p.m. peak hour trips when compared to the previously entitled residential apartment development.

Existing Conditions LOS

Currently, the intersection at Montague Expressway & S. Main Street/Oakland Road operates at LOS F during the a.m. and p.m. peak hour. All other intersections operate at an acceptable LOS based on applicable jurisdictional standards during both weekday a.m. and p.m. peak hours.

Existing Plus Project Conditions LOS

With the addition of project traffic, all project intersections operating at an acceptable LOS under Existing Conditions are expected to continue to operate acceptably, with minimal increases in average delay. At the Montague Expressway & S. Main Street/Oakland Road intersection, the addition

of project traffic is expected to increase the average control delay for critical movements by less than four seconds during the a.m. and p.m. peak hours, which does not constitute a significant impact for intersections already operating at LOS F under Existing Conditions.

Background Conditions LOS

With the addition of peak hour traffic from approved and pending projects and the completion of planned improvements to Montague Expressway, the intersection of Montague Expressway & S. Main Street/Oakland Road is expected to operate at LOS F during the a.m. and p.m. peak hours. All other intersections are expected to operate at acceptable LOS based on applicable jurisdictional standards during both the weekday a.m. and p.m. peak hours.

Background plus Project Conditions LOS

With the addition of project traffic, all project intersections operating at an acceptable LOS under Background Conditions are expected to continue to operate acceptably, with minimal increases to delay. At the Montague Expressway & S. Main Street/Oakland Road intersection, the addition of project traffic is expected to increase the average control delay for critical movements by less than four seconds during the a.m. and p.m. peak hours, which does not constitute a significant impact for intersections already operating at LOS F under Background Conditions.

Queue Lengths

An evaluation of 95th percentile (maximum) queue lengths for dedicated left- and right-turn pockets affected by the proposed project was conducted for the Existing and Background Conditions scenarios. The addition of project traffic is not expected to cause new spillover conditions to any adjacent through lanes or intersections, with the exception of the westbound left-turn at the South Main Street/Cedar Way intersection.

For storage lanes already operating deficiently under Existing and Background baseline conditions, the addition of project traffic is expected to increase the 95th percentile queue by less than one car length (20-25 feet), with the exception of the eastbound right-turn at the Montague Expressway & McCandless Drive/Trade Zone Boulevard intersection, which is expected to experience an increase in queue lengths of 28-feet during the p.m. peak hour under Background plus Project conditions. These additional queue lengths due to project traffic are not considered significant. It is therefore expected that the addition of project traffic will not contribute significantly to Existing and Background Conditions vehicle queues at the study intersections. In terms of improvements to accommodate spillover conditions at the South Main Street/Cedar Way intersection under both Existing plus Project and Background plus Project Conditions, TJKM recommends installing a 60' westbound left-turn pocket (increase of 15') with a corresponding adjustment to the location of the proposed taper. This improvement will may necessitate the removal of two planned on-street parallel parking spaces within the site area.

Site Access

The primary project site access is a 40-foot wide extension of Cedar Way east of South Main Street, which will initially provide access to the first phase of the project. An additional 24-foot wide Costa Street extension is proposed approximately 310 feet north of the Cedar Way driveway, and is expected to provide primary access to the four-story parking structure under Phase 2 via a recorded

emergency vehicle access easement. Given the relatively low number of a.m. and p.m. peak hour trips that the proposed project is expected to generate, the proposed project trips are not expected to result in queuing issues on South Main Street. An additional 20-foot wide fire and emergency access lane is proposed along the southern boundary of the project site. Overall, TJKM expects that the site access as proposed will adequately serve all vehicle types within the project site.

On Site Traffic Circulation

TJKM reviewed the project site layout in terms of internal traffic circulation for autos, including the two-aisle, one-way passenger loading zone at the main entrance to the Phase 1 building, and driveway aisle widths within the subterranean (Phase 1) garage and the four-story (Phase 2) garage. Based on the site plan and information received from the project applicant, TJKM expects that the site circulation will adequately serve all vehicles within the site.

Parking

TJKM reviewed the site plan and information received from the project applicant to determine whether the proposed number of off-street parking spaces meets the City of Milpitas requirements. The City of Milpitas Municipal Code requires 391 off-street parking spaces for the proposed number of units of the project. The proposal currently includes 398 off-street parking spaces, including 141 spaces in a subterranean structure under Phase 1, and 257 spaces in a four-story garage under Phase 2. Thus, the proposed parking supply is expected to be adequate based on the City of Milpitas Municipal Code requirements.

TJKM additionally consulted ITE's *Parking Generation* 4th edition to estimate the total parking demand for the proposed project based on previous studies of peak period parking demand for compatible land uses. Application of the 85th percentile parking demand rates provided in *Parking Generation* to the proposed project produces a demand estimate of 227 parked vehicles, which is 171 fewer than the current proposal of 398 spaces provided, which is typical of senior residences with fewer residents owning vehicles and that also have access to alternative transportation means. Given this characteristic, it should be noted that the project applicant is considering converting the fourth story of the Phase 2 parking structure to a recreation/open space amenity for residents, which would eliminate 65 parking spaces and reduce the total number of parking spaces in the structure to 333. However, even with the elimination of 65 spaces on the fourth story of the parking structure, the proposed parking supply is expected to be adequate based on ITE *Parking Generation* 85th percentile parking demand rates for Senior Housing, Assisted Living, and Congregate Care land uses.

City of Milpitas - Traffic Impact Analysis for South Main Senior Lifestyles Development

Vicinity Map

Figure 1

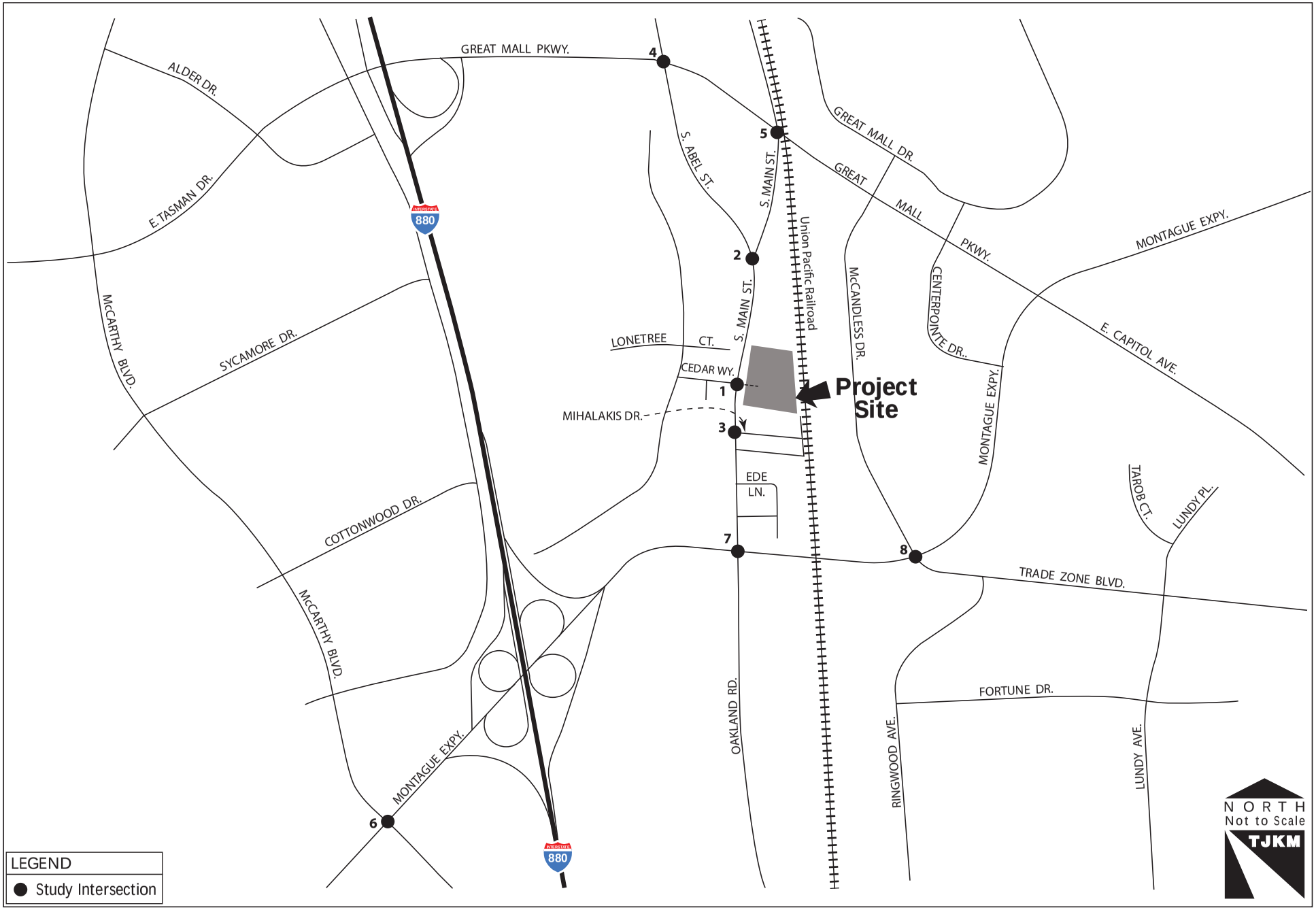

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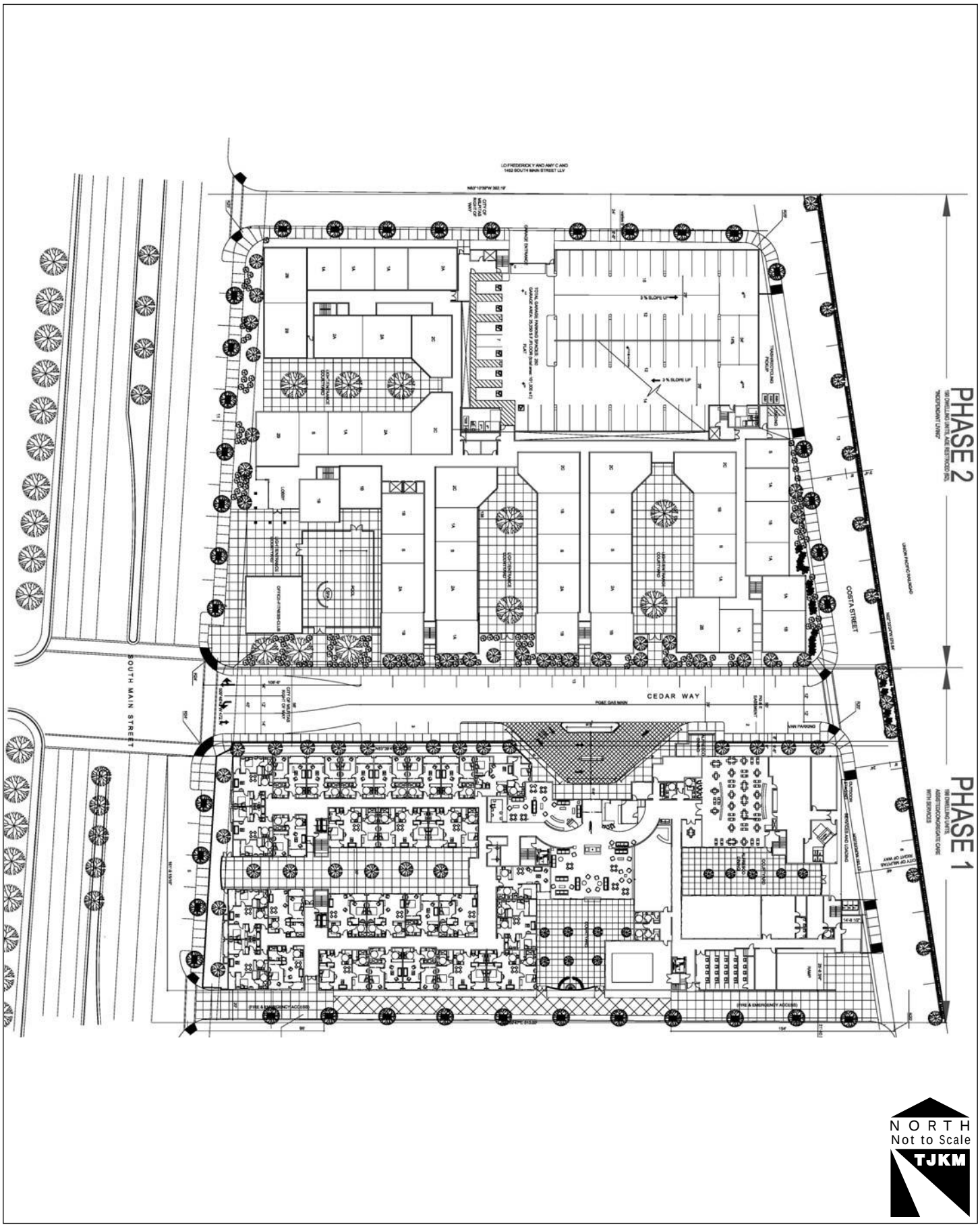
Figure 2

Project Site Plan



Level of Service Analysis Methodology

Level of service (LOS) is a qualitative measure that describes operational conditions as they relate to the traffic stream and perceptions by motorists and passengers. The level of service generally describes these conditions in terms of such factors as speed and travel time, delays, freedom to maneuver, traffic interruptions, comfort, convenience and safety. The operational levels of service are given letter designations from "A" to "F," with "A" representing the best operating conditions (free-flow) and "F" representing the worst (severely congested flow with high delays). Intersections generally are the capacity-controlling locations with respect to traffic operations on arterial and collector streets.

Signalized Intersections

The study intersections under traffic signal control were analyzed using the Highway Capacity Manual 2000 (HCM 2000) Operations Method contained in the standard traffic software TRAFFIX. This methodology determines LOS based on average control delay per vehicle for the overall intersection during peak hour intersection operating conditions. LOS "A" indicates free flow conditions with little or no delay, while LOS "F" indicates jammed conditions with excessive delay and long back-ups. The methodology is described in detail in Appendix A.

Intersection Level of Service Threshold Criteria

All study intersections fall within City of Milpitas jurisdiction but are subject to different traffic operational standards depending on whether they are monitored as part of the Santa Clara County VTA CMP and non-CMP standards for the study intersections are described below.

Santa Clara County CMP Intersections

The intersection operational standard is LOS E for VTA CMP intersections located within the City of Milpitas. Exceedance of this LOS threshold at CMP intersections would occur when the addition of traffic associated with implementation of a proposed project causes:

- Intersection operations to deteriorate from an acceptable level (LOS E or better) under Background Conditions to an unacceptable level (LOS F); or
- Exacerbation of unacceptable operations by increasing the average critical delay by more than four (4) seconds and increasing the critical volume-to-capacity (V/C) ratio by 0.01 or more at an intersection operating at LOS F under the Current Precise Plan Conditions.
- An increase in the V/C ratio of 0.01 or more at an intersection with unacceptable LOS F operations when the change in critical delay is negative (i.e., decreases). This can occur if the critical movements change.

City of Milpitas (Non-CMP) Intersections

LOS D is the standard for non-CMP intersections within City of Milpitas jurisdiction. For purposes of this study, such intersections exceeding this threshold will be evaluated for potential mitigations.

Study Traffic Analysis Scenarios

The study evaluated traffic operational conditions under the following four (4) analysis scenarios:

1. Existing Conditions – this scenario is based on existing roadway conditions and traffic counts.
2. Existing plus Project Conditions – this scenario is similar to Existing Conditions, but with the addition of approved project trips.
3. Background (Existing plus Approved Projects) Conditions – this scenario is similar to Existing Conditions, but with the addition of trips from City approved and pending projects within the study area.

4. Background plus Proposed Project Conditions – this scenario is identical to Background Conditions, but includes additional traffic expected to be generated by the proposed project.

Study Intersections

The study focused on evaluating traffic conditions at eight study intersections that the proposed project may potentially impact (see Figure 1), selected in consultation with City of Milpitas staff. The study intersections and their associated traffic controls are:

1. South Main Street & Cedar Way/Project Driveway (Signal)
2. South Main Street & South Abel Street (Signal)
3. South Main Street & Mihalakis Drive (Signal)
4. Great Mall Parkway & South Abel Street (Signal)
5. Great Mall Parkway & South Main Street (Signal)
6. Montague Expressway & McCarthy Boulevard/O'Toole Avenue (Signal)
7. Montague Expressway & South Main Street/Oakland Road (Signal)
8. Montague Expressway & McCandless Drive/Trade Zone Boulevard (Signal)

Existing Conditions

Existing Roadway System and Setting

Regional access to the proposed project site is provided by Interstates 880 (I-880), 680 (I-680), State Route 237 (SR 237), Montague Expressway, Great Mall Parkway/Tasman Drive, and Capitol Avenue. Local access are provided by Montague Expressway, S. Main Street/Oakland Road, McCandless Drive/Trade Zone Boulevard, with the project access point located on S. Main Street. The primary facilities providing regional and local access are described in detail below.

I-880 is a north-south freeway located west of the project site. This freeway extends south to the City of San Jose and north to the City of Oakland. Near the proposed project, the freeway consists of six lanes and provides local interchange connections at Great Mall Parkway/Tasman Drive and Montague Expressway. The I-880/SR 237 interchange is a major interchange to the north that provides additional regional access to northern and western Santa Clara County.

I-680 is a north-south freeway located east of the project site. This freeway extends south to the City of San Jose and north to Solano County. Near the project site, the freeway consists of eight mixed-flow lanes. Further north, I-680 consists of six mixed-flow lanes plus a southbound high-occupancy toll (HOT) lane north of Calaveras Boulevard (SR 237). Local interchange connections near the proposed project site are provided at Montague Expressway and Capitol Avenue. I-680 southbound is the primary commute direction during the a.m. peak hour, while northbound is the primary commute direction during the p.m. peak hour.

Montague Expressway is an east-west, six- to eight-lane divided expressway operating by Santa Clara County, which runs between the U.S. 101 freeway to the east and I-680 to the west. The roadway provides limited access to fronting land uses, with primary access via signalized intersections that include signal timing optimized for expressway traffic progressions. Between McCarthy Boulevard and Great Mall Parkway, Montague Expressway is a six-lane roadway, and connects with I-880 and I-680 via full cloverleaf interchanges.

Great Mall Parkway is an east-west, six-lane divided arterial roadway extending from I-880 easterly to Montague Expressway. Great Mall Parkway is designated as Tasman Drive west of I-880, providing a connection to the Cities of San Jose, Santa Clara, and Sunnyvale. Great Mall Parkway becomes Capitol Avenue east of Montague Expressway, connecting by interchange to I-680 and continuing southerly through the City of San Jose. Santa Clara VTA light-rail transit (LRT) service is provided along the median of Great Mall Parkway adjacent to the project vicinity in an aerial viaduct, with stations located at S. Main Street and just east of Montague Expressway.

Main Street is a north-south, two- to four-lane arterial roadway parallel to Abel Street extending from Railroad Avenue (north of SR 237/Calaveras Boulevard) south to Montague Expressway. This roadway, located west of the proposed project site, is designated as Oakland Road south of Montague Expressway, where it widens to six-lanes and continues into San Jose. Main Street includes two lanes north of Curtis Avenue and four lanes with a two-way left-turn lane and bicycle lanes south of Curtis Avenue.

Abel Street is a north-south, four-lane arterial roadway extending from Milpitas Boulevard (north of SR 237/Calaveras Boulevard) south to Main Street. This roadway is located north of the proposed project site. The section of Abel Street between Corning and Curtis Avenues includes four travel lanes plus a two-way left-turn lane.

Trade Zone Boulevard is an east-west, four-lane minor arterial roadway located east of the proposed project site. It forms the south leg of the Montague Expressway/McCandless Drive study intersection, providing the southeastern gateway to the project site. North of Montague Expressway, the roadway continues as McCandless Drive, a north-south, two-lane collector roadway.

Existing Transit Service

The Santa Clara VTA, which operates bus and light rail service within Santa Clara County, runs multiple transit routes through the study area.

The Great Mall/Main Transit Center (TC) is located within a half-mile walking distance of the proposed project site, on the north side of Great Mall Parkway east of Main Street. This multimodal transit hub consists of an elevated LRT station above Great Mall Parkway, as well as a bus transfer facility and park-and-ride lot located on the northeast corner of the Great Mall Parkway/Main Street intersection. A second LRT station (Montague) is located approximately two-thirds of a mile east of the Great Mall/Main TC and is elevated above Capitol Avenue. There are no bus nor park-and-ride facilities provided at this second station.

VTA bus routes operating on Montague Expressway and S. Main Street/Oakland Road also serve the project site. On Montague Expressway, VTA operates Express Bus Route 181, Limited Stop Route 321, and the Altamont Commuter Express (ACE) Violet Shuttle (Route 831). On Oakland Road and McCandless Drive/Trade Zone Boulevard, VTA operates local bus Routes 66 and 77, respectively. Table I summarizes the destinations, days and hours of operation, and service headways for the bus routes.

Table I: Existing Transit Service within Study Area

Route	*From*	*To*	*Weekdays*			*Weekends*	
			Operating Hours	*Peak Hdwys*	*Midday Hdwys*	*Operating Hours*	*Midday Hdwys*
66	Kaiser San Jose	Milpitas/ Dixon Road	5:10a – 12:07a	15	15-20	5:52a – 12:05a	15-20
77	Eastridge TC	Great Mall/Main TC	5:55a – 9:54p	15-20	20	6:41a – 7:55p	30
181	Fremont BART Station	San Jose Diridon TC	5:27a - 12:40a	15	30	7:04a - 12:41a	30
321	Great Mall/Main TC	Lockheed Martin	8:10a – 8:44a 5:50p – 6:32p	1 run per peak	–	No Service	–
831	Great America ACE/ Amtrak Station	Lundy/Commerce	6:16a – 9:55a 3:10p – 6:39p	60-75	–	No Service	–

Notes: Hdwys = Headways

Existing Bicycle Access
Bicycle facilities are classified in three ways: off-street paths separated from auto traffic (Class I), on-street striped lanes (Class II), and on-street signed routes in which bicycles share the roadway with other vehicles (Class III). Currently, Class II bicycle lanes are provided on Great Mall Parkway, Main Street, McCandless Drive, and Capitol Avenue south of Trimble Road within the project study area. Currently, there are no Class I bicycle paths or Class III bicycle routes designated within the project study area.

Existing Traffic Volumes
Baymetrics collected existing vehicle, bicycle, and pedestrian turning movement counts during weekday a.m. and p.m. peak periods (7:00-9:00 a.m. and 4:00-6:00 p.m., respectively) at all study intersections as follows:

May 2013
- Great Mall Parkway & South Abel Street
- Great Mall Parkway & South Main Street
- Montague Expressway & McCandless Drive/Trade Zone Boulevard

December 2013
- South Main Street & Cedar Way
- South Main Street & South Abel Street
- Montague Expressway & McCarthy Boulevard/O'Toole Avenue
- Montague Expressway & South Main Street

March 2014
- South Main Street/Mihalakis Drive

Peak hour traffic count data sheets for all study intersections are included in Appendix B.

Intersection Level of Service Analysis Results (Existing Conditions)
Figure 3 shows the existing peak hour intersection vehicle turning movement counts at the study intersections, as well as current lane configurations and traffic controls. Table II summarizes the results of the intersection analysis under Existing Conditions. Detailed LOS calculations are contained in Appendix C. Currently, all study intersections are operating at acceptable LOS during both weekday a.m. and p.m. peak hours, with the exception of the Montague Expressway & South Main Street / Oakland Road intersection, which currently operates at LOS F during the a.m. and p.m. peak hours, exceeding VTA CMP standards of LOS E or better.

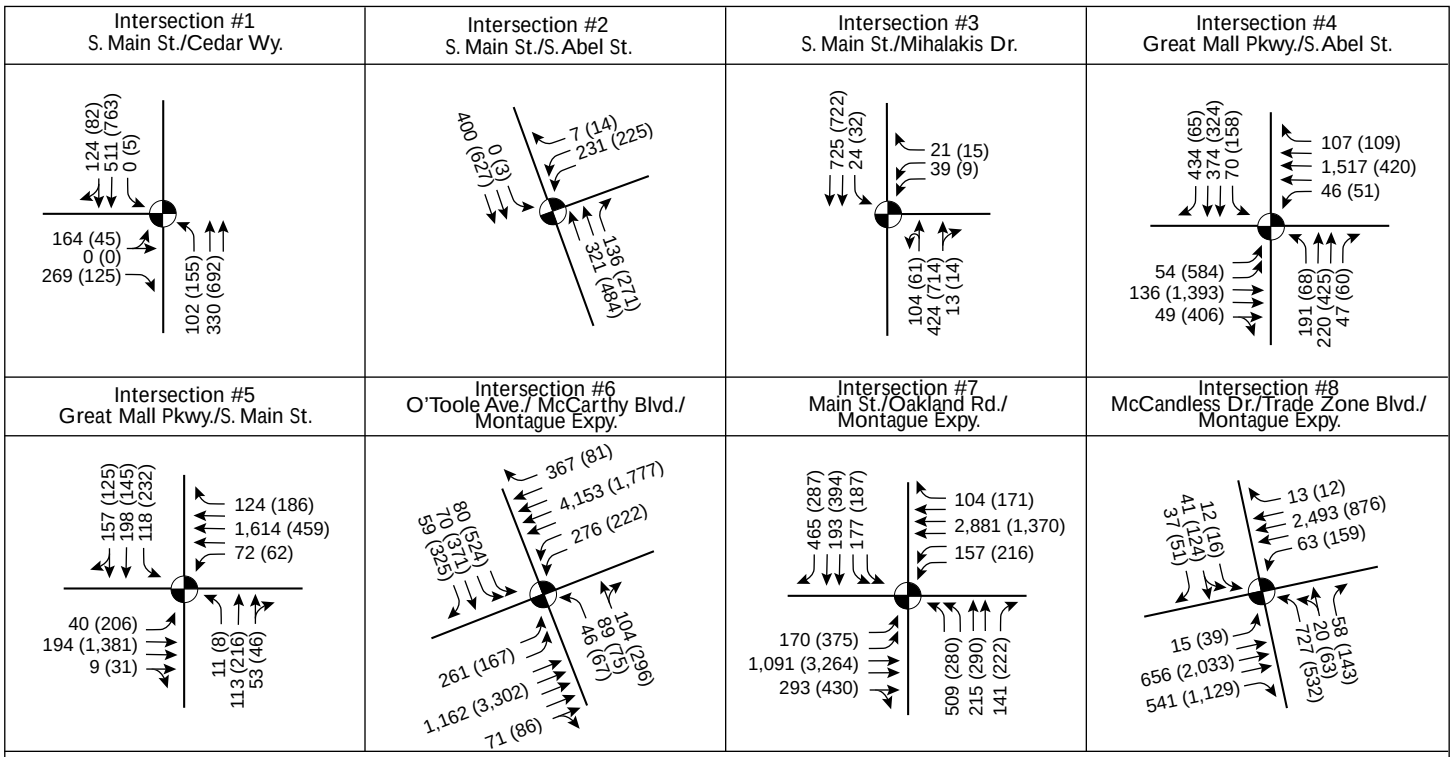
Table II: Intersection Levels of Service – Existing Conditions

ID	Intersection	Control	Existing Conditions							
			A.M. Peak Hour				P.M. Peak Hour			
			Delay	LOS	Critical v/c	Average Critical Delay	Delay	LOS	Critical v/c	Average Critical Delay
1	S. Main Street/Cedar Way/Project Driveway	Signal	22.0	C	0.486	25.2	15.5	B	0.503	21.0
2	S. Main Street/S. Abel Road	Signal	14.4	B	0.227	15.9	12.8	B	0.291	14.8
3	S. Main Street/Mihalakis Drive	Signal	15.5	B	0.466	22.0	13.9	B	0.499	21.2
4	Great Mall Parkway/S. Abel Street	Signal	24.6	C	0.897	27.7	20.8	C	0.796	21.3
5	Great Mall Parkway/S. Main Street	Signal	13.6	B	0.576	11.5	18.1	C	0.627	17.4
6	Montague Expressway/McCarthy Boulevard/O'Toole Avenue	Signal	47.1	D	0.973	51.3	70.7	E	1.035	86.4
7	Montague Expressway/S. Main Street/Oakland Road	Signal	**103.8**	**F**	1.158	135.2	**114.3**	**F**	1.227	150.7
8	Montague Expressway/McCandless Drive/Trade Zone Boulevard	Signal	36.1	D	0.846	42.2	43.8	D	0.931	63.7

Notes: 1) LOS=Level of Service, Delay = Average control delay per vehicle, v/c = volume to capacity ratio
2) **Bold** indicates LOS exceeds applicable jurisdictional standards for intersection operating conditions.

City of Milpitas - Traffic Impact Analysis for South Main Senior Lifestyles Development
Existing Conditions Traffic Volumes, Lane Geometry, and Traffic Controls

Figure 3



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Existing plus Project Conditions

This section details expected traffic conditions at the study intersections under Existing plus Project Conditions. This analysis scenario is similar to Existing Conditions, but with the addition of vehicle trips generated by the proposed project. Analysis of this scenario is consistent with both City of Milpitas and VTA Transportation Impact Analysis Guidelines.

Project Location and Proposal

The proposed project is located on South Main Street between South Abel Street and Mihalakis Drive, within the Transit Specific Plan Area of the City of Milpitas. The proposed project will be constructed in two phases, with the first phase comprised of 129 congregate care units, and 70 beds for assisted living residents. The second phase of the project includes the construction of 190 independent living senior housing units. The proposed project includes two full-access driveways, one at Cedar Way and one immediately north of Cedar Way, and an additional fire and emergency access driveway on South Main Street.

Trip Generation – Proposed Project

TJKM developed expected trip generation for the proposed project based on the Institute of Transportation Engineers *Trip Generation, 9th Edition*. The ITE uses most closely matching the proposed project based on the variety of proposed senior residential unit types are Assisted Living (Code 254), Congregate Care (253), and Senior Housing (252). Senior Housing most closely matches in the independent living units of the development. Table III shows the resulting trip generation that is expected to be generated by the proposed project. The proposed project is expected to generate 58 trips during the a.m. peak hour and 89 trips during the p.m. peak hour before trip discounts are applied.

TJKM evaluated the eligibility of the proposed project for potential trip discounts based on Santa Clara County's VTA guidelines. The project qualifies for a transit discount since the project is within a 2,000-foot walk of a rail station or major bus stop (defined as a stop where six or more buses per hour from the same or different routes stop during the peak period). Therefore, TJKM applied 9 percent transit-based trip reduction, which reduces the number of expected a.m. and p.m. peak hour trips generated by the project to 53 and 81, respectively.

Table III: Proposed Project Trip Generation

Land Use (ITE Code)	*Size*		*A.M. Peak*						*P.M. Peak*					
			Rate	*In %*	*Out %*	*In*	*Out*	*Total*	*Rate*	*In %*	*Out %*	*In*	*Out*	*Total*
Assisted Living (254)	70	Occupied Beds	0.18	68	32	9	4	13	0.29	50	50	10	10	20
Congregate Care (253)	129	DUs	0.06	59	41	5	3	8	0.17	55	45	12	10	22
Senior Housing (252)	190	DUs	0.20	34	66	13	25	38	0.25	54	46	26	22	47
Total (Undiscounted)	**389**	**DUs**				**26**	**32**	**58**				**48**	**42**	**89**
9 % Fixed Rail Discount						-2	-3	-5				-4	-4	-8
Total (with Discounts)						**24**	**29**	**53**				**43**	**38**	**81**

Notes: 1) DUs = Dwelling Units
Source: *Trip Generation* 9th Edition (2012)

TJKM additionally compared the number trips generated by the proposed project with a previously entitled residential apartment development at the project site, which was estimated to produce 198 a.m. peak hour trips and 240 p.m. peak hour trips. The current proposed project is expected to generate 71 percent fewer a.m. peak hour trips, and 63 percent fewer p.m. peak hour trips when compared to the previously entitled development.

Project Trip Distribution and Assignment

Trip distribution is a process that determines in what proportion vehicles would be expected to travel between a project site and various destinations outside the project study area. The process of trip assignment determines the various routes that vehicles would take from the project site to each destination using the calculated trip distribution.

Trip distribution assumptions for the South Main Senior Lifestyles Development were based on the trip distributions contained in the Milpitas TASP and in consultation with city staff. The assumed distribution percentages are as follows:

- 19 percent to/from Montague Expressway east
- 19 percent to from Trade Zone Boulevard east
- 17 percent to/from I-880 north
- 11 percent to/from I-880 south
- 12 percent to/from Montague Expressway west
- 8 percent to/from Oakland Road
- 3 percent to/from Abel Street north
- 3 percent to/from S Main Street north
- 2 percent to from East Tasman Drive west
- 2 percent to/from McCarthy Boulevard north
- 2 percent from Ringwood Avenue south
- 2 percent from Lundy Avenue south

Project trips were assigned to the study intersections according to the above trip distribution percentages. Figure 4 shows the proposed project trip distribution percentages and resulting trip assignments at all study intersections. The assigned project trips were then added to Existing Conditions traffic volumes to generate Existing plus Project traffic volumes. Figure 5 shows the resulting traffic volumes at the study intersections under Existing plus Project Conditions, as well as current lane configurations and traffic controls. The intersection traffic controls and lane geometries assumed under this analysis scenario are the same as under the Existing Conditions analysis scenario.

Intersection Level of Service Analysis Results (Existing plus Project Conditions)

Table II summarizes the results of the intersection analysis under Existing plus Project Conditions. Detailed LOS calculations are contained in Appendix D. With the addition of project traffic, all project intersections operating at an acceptable LOS under Existing Conditions are expected to continue operating acceptably, with minimal increases in average delay. At the Montague Expressway & S. Main Street/Oakland Road intersection, the addition of project traffic is expected to increase the average control delay for critical movements by less than four seconds during the a.m. and p.m. peak hours, which does not constitute a significant impact for intersections already operating at LOS F under Existing Conditions. Thus, no mitigations are required under this scenario.

Table IV: Intersection Levels of Service – Existing plus Project Conditions

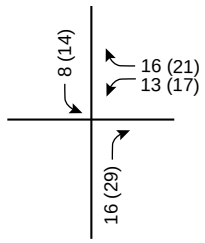
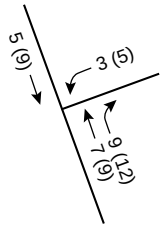
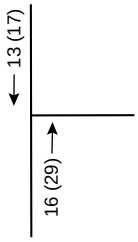
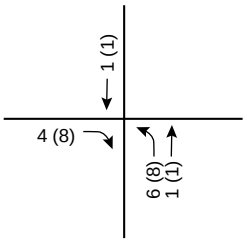
ID / Intersection / Traffic Control			Existing Conditions								Existing Plus Project Conditions							
			A.M. Peak Hour				P.M. Peak Hour				A.M. Peak Hour				P.M. Peak Hour			
			Delay	LOS	Critical v/c	Average Critical Delay	Delay	LOS	Critical v/c	Average Critical Delay	Delay	LOS	Critical v/c	Average Critical Delay	Delay	LOS	Critical v/c	Average Critical Delay
1	S. Main Street/Cedar Way/Project Driveway	Signal	22.0	C	0.486	25.2	15.5	B	0.503	21.0	25.2	C	0.511	27.2	19.0	B	0.531	23.3
2	S. Main Street/S. Abel Road	Signal	14.4	B	0.227	15.9	12.8	B	0.291	14.8	14.6	B	0.233	16.0	12.9	B	0.296	14.8
3	S. Main Street/Mihalakis Drive	Signal	15.5	B	0.466	22.0	13.9	B	0.499	21.2	15.4	B	0.475	22.1	13.9	B	0.514	21.4
4	Great Mall Parkway/S. Abel Street	Signal	24.6	C	0.897	27.7	20.8	C	0.796	21.3	24.9	C	0.902	28.2	20.9	C	0.798	21.4
5	Great Mall Parkway/S. Main Street	Signal	13.6	B	0.576	11.5	18.1	C	0.627	17.4	13.7	B	0.580	11.6	18.3	C	0.634	17.6
6	Montague Expressway/ McCarthy Boulevard/ O'Toole Avenue	Signal	47.1	D	0.973	51.3	70.7	E	1.035	86.4	47.2	D	0.974	51.4	70.8	E	1.036	86.6
7	Montague Expressway/ S. Main Street/ Oakland Road	Signal	**103.8**	**F**	1.158	135.2	**114.3**	**F**	1.227	150.7	**106.1**	**F**	1.166	138.7	**115.8**	**F**	1.233	153.6
8	Montague Expressway/ McCandless Drive/ Trade Zone Boulevard	Signal	36.1	D	0.846	42.2	43.8	D	0.931	63.7	36.3	D	0.848	42.5	44.2	D	0.934	64.2

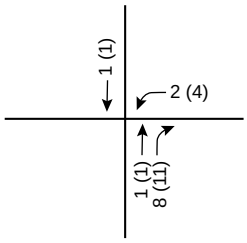
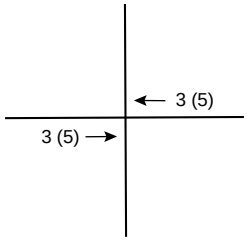
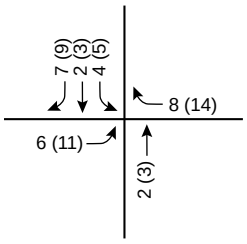
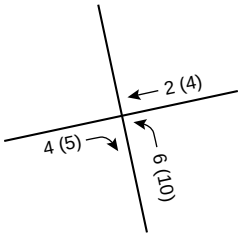
Notes: 1) LOS=Level of Service, Delay = Average control delay per vehicle, v/c = volume to capacity ratio
2) **Bold** indicates LOS exceeds applicable jurisdictional standards for intersection operating conditions.

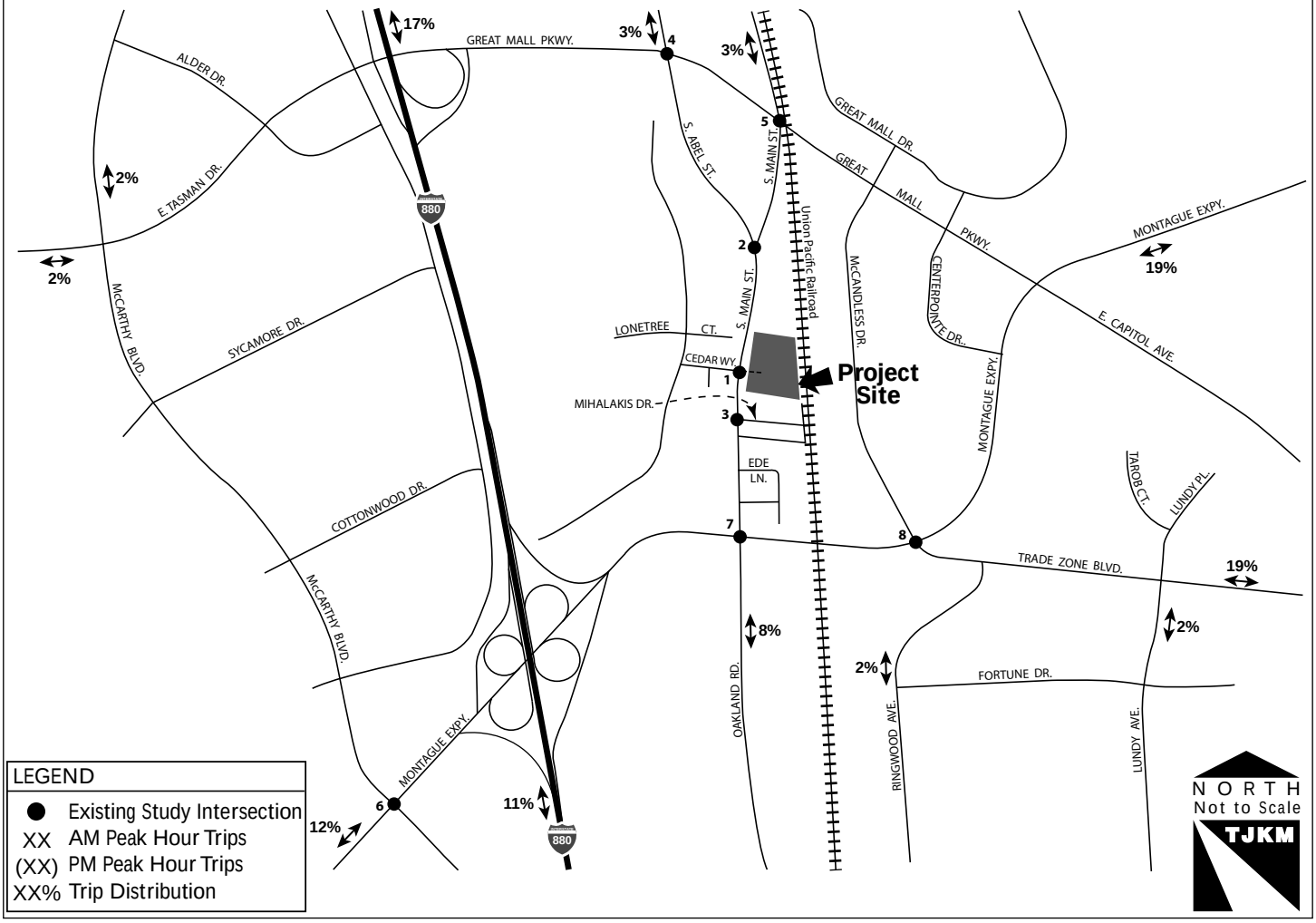
City of Milpitas - Traffic Impact Analysis for South Main Senior Lifestyles Development

Proposed Project Trip Distribution and Assignment

Figure 4

Intersection #1 S. Main St./Cedar Wy./Project Dwy.	Intersection #2 S. Main St./S. Abel St.	Intersection #3 S. Main St./Mihalakis Dr.	Intersection #4 Great Mall Pkwy./S. Abel St.
			

Intersection #5 Great Mall Pkwy./S. Main St.	Intersection #6 O'Toole Ave./ McCarthy Blvd./ Montague Expy.	Intersection #7 Main St./Oakland Rd./ Montague Expy.	Intersection #8 McCandless Dr./Trade Zone Blvd./ Montague Expy.
			



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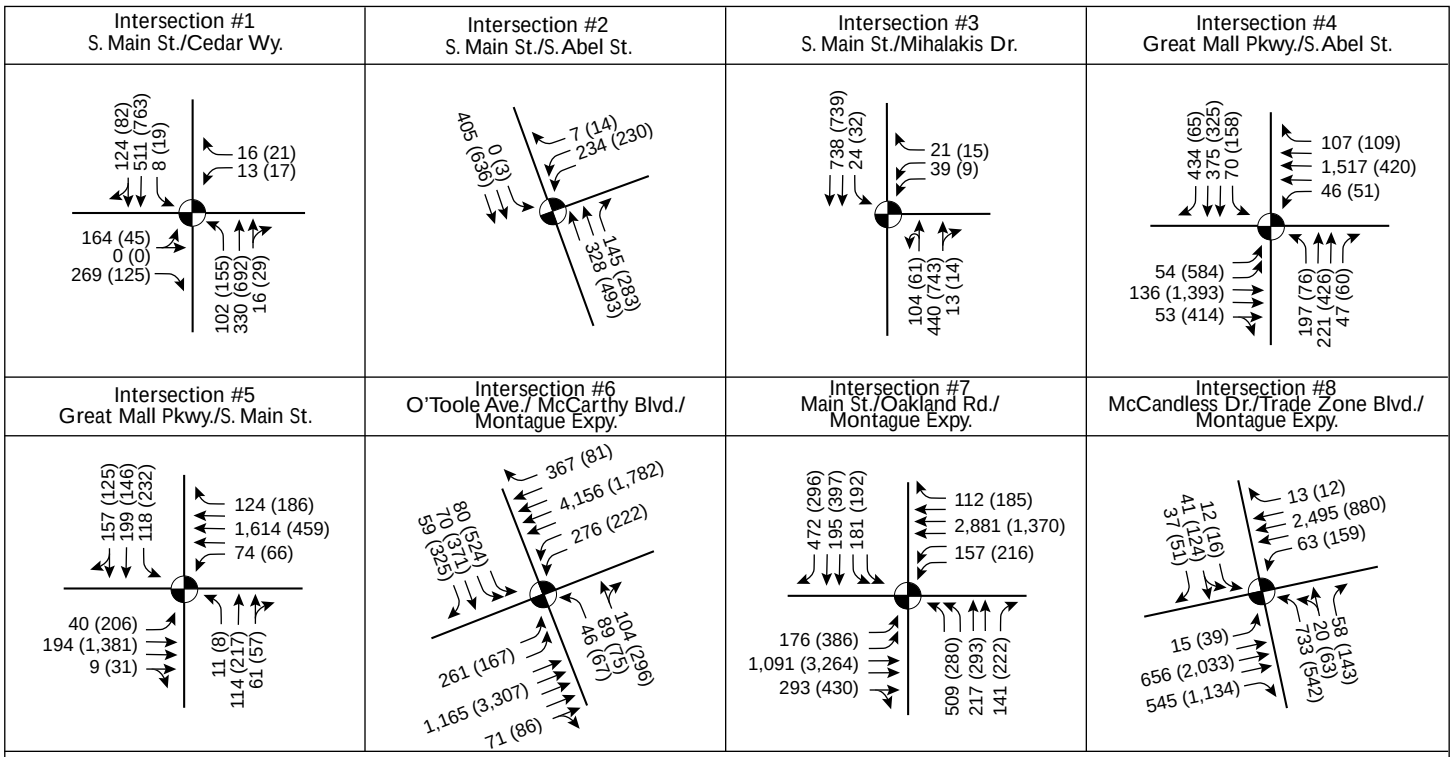
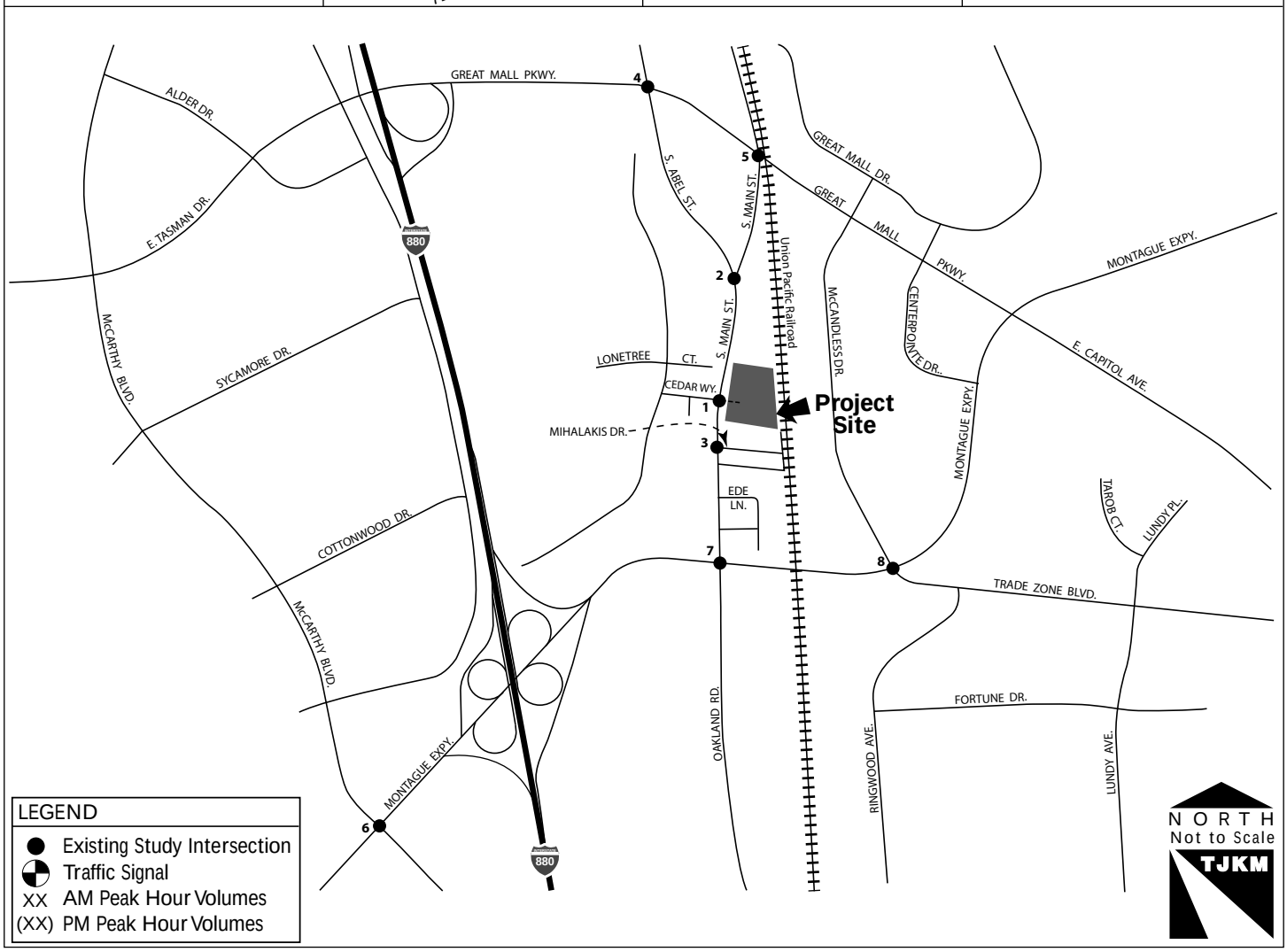
City of Milpitas - Traffic Impact Analysis for South Main Senior Lifestyles Development
Existing plus Project Conditions Traffic Volumes, Lane Geometry, and Traffic Controls

Figure 5





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Background (Existing plus Approved Project) Conditions

This section details expected traffic conditions at the study intersections under Background Conditions. This analysis scenario is similar to Existing Conditions, but with the addition of vehicle trips generated by approved but not yet constructed projects as identified by the City of Milpitas Planning Division. Under this scenario, it is assumed that the proposed project site remains undeveloped. This scenario serves as a baseline for determining any exceedance of LOS thresholds with respect to the expected traffic generated by the proposed project. Analysis of this scenario is consistent with both City of Milpitas and VTA Transportation Impact Analysis Guidelines.

Background Development Assumptions and Traffic Estimates

Traffic volumes at the study intersections under Background Conditions were estimated by adding approved and pending project trips to Existing Conditions traffic volumes. A list of approved projects within Milpitas city limits that was included in the analysis is provided in Table V. The table also shows the daily, a.m. peak hour, and p.m. peak hour trips expected to be generated by each project before and after trip reduction discounts are applied. After applicable trip reduction discounts are applied, the approved and pending projects are expected to generate a total of 14,669 daily trips, with 1,141 trips occurring during the a.m. peak hour, and 1,356 trips occurring during the p.m. peak hour.

Table V: Pending and Approved Projects Trip Generation

Project	*Land Use*	*Size (DUs)*	*Daily Trips*	*A.M. Peak Hour Trips*			*P.M. Peak Hour Trips*		
				In	*Out*	*Total*	*In*	*Out*	*Total*
1102 Abel St.	Residential Condominium/Townhouse(230)	381	2,060	26	125	151	121	59	180
1201 S. Main St.	Residential Condominium/townhouse(230)	204	1,196	16	76	91	72	36	108
1200 Piper Dr.	Residential Condominium/townhouse(230)	94	610	8	41	49	38	19	57
	Apartment (220)	638	3,990	63	253	316	240	129	369
1425 S. Milpitas Dr.	Residential Condominium/townhouse(230)	77	512	7	35	42	33	16	49
	Single-family detached (210)	46	514	10	31	42	33	19	52
	Apartment (220)	180	1,214	18	74	92	76	41	117
1765 McCandless Dr.	Residential Condominium/townhouse(230)	276	1,556	20	97	116	93	46	138
324-368 Montague Expy	Residential Condominium/townhouse(230)	92	598	8	40	48	38	19	56
	Single-family detached (210)	42	473	10	29	39	30	18	48
750 E Capitol Ave	Apartment (220)	420	2,669	42	168	210	162	87	249
Totals (Undiscounted)			15,391	28	968	1,196	934	488	1,422
Discounts									
9% Fixed Rail									
1102 Abel St.			185	2	11	13	11	5	16
1201 S. Main St.			108	1	7	8	7	3	10
750 E Capitol Ave.			240	4	15	19	14	8	22
1200 Piper Dr.			414	7	27	34	25	14	39
1425 S Milpitas Blvd.			202	3	13	16	13	7	20
2 % Major Bus Stop									
1765 McCandless Dr.			31	0	2	2	2	1	3
324-368 Montague Expy			21	0	2	2	2	0	2
Total Trips Discounted			*722*	*9*	*46*	*55*	*45*	*21*	*66*
Totals (with Discounts)			**14,669**	**219**	**922**	**1,141**	**889**	**467**	**1,356**

Vehicle trips from the approved and pending projects were assigned to the network according to the trip distribution assumptions contained in the TASP Draft Environmental Impact Report (DEIR) and in consultation with city staff. Figure 6 shows the resulting approved and pending project trip assignments at each of the study intersections. These assigned trips were added to Existing Conditions traffic volumes to generate Background Conditions traffic volumes. The resulting turning movement volumes, traffic controls, and lane geometries anticipated for the study intersections under Background Conditions are shown in Figure 7. The intersection traffic controls and lane geometries are based on the anticipated Santa Clara County Expressway Master Plan roadway improvements under Background Conditions that are listed below.

Background Roadway Network and Improvement Assumptions

Under Background Conditions, several transportation improvements are assumed to be in place. According to the 2009 Comprehensive County Expressway Planning Study, Santa Clara County has identified the following improvements for Montague Expressway through the project study area:

- Convert the HOV lane on the six-lane portion between I-880 and I-680 to mixed-flow operations due to operational and safety problems. This project has been completed.
- Widen to eight lanes from Mission College to I-680 and to six lanes from I-680 to Park Victoria, including various intersection at-grade improvements and I-880 and I-680 interchange work. It is anticipated that right-of-way acquisition would be required to accommodate the proposed roadway widening. A Final Environmental Assessment/Initial Study was adopted in September 2002, and according to the 2009 Expressway Study, this improvement is partially completed and partially funded. It should be noted that the City of Milpitas recently completed widening Montague Expressway to four lanes per direction between Great Mall Parkway and Milpitas Boulevard, which was outside the scope of the County's planned Montague Expressway Improvement Project.

In addition, the Milpitas TASP anticipates improvements to the Montague Expressway/McCandless Drive/Trade Zone Boulevard study intersection, which will include widening the northbound (Trade Zone) approach to accommodate two left-turn lanes, one shared-through/left lane, and one right-turn lane. Similarly, and widening the southbound (McCandless) approach to accommodate the same configuration as the northbound approach.

Intersection Level of Service Analysis Results (Background Conditions)

Table VI shows the results of the LOS analysis conducted for the study intersections under Background Conditions. Detailed calculation sheets are contained in Appendix E. All intersections operating with acceptable service levels under Existing Conditions are expected to continue operating within applicable jurisdictional standards under Background Conditions, with the exception of the Montague Expressway & South Main Street/Oakland Road intersection, which is expected to continue to operate at LOS F during the a.m. and p.m. peak hours.

Table VI: Intersection Levels of Service – Background Conditions

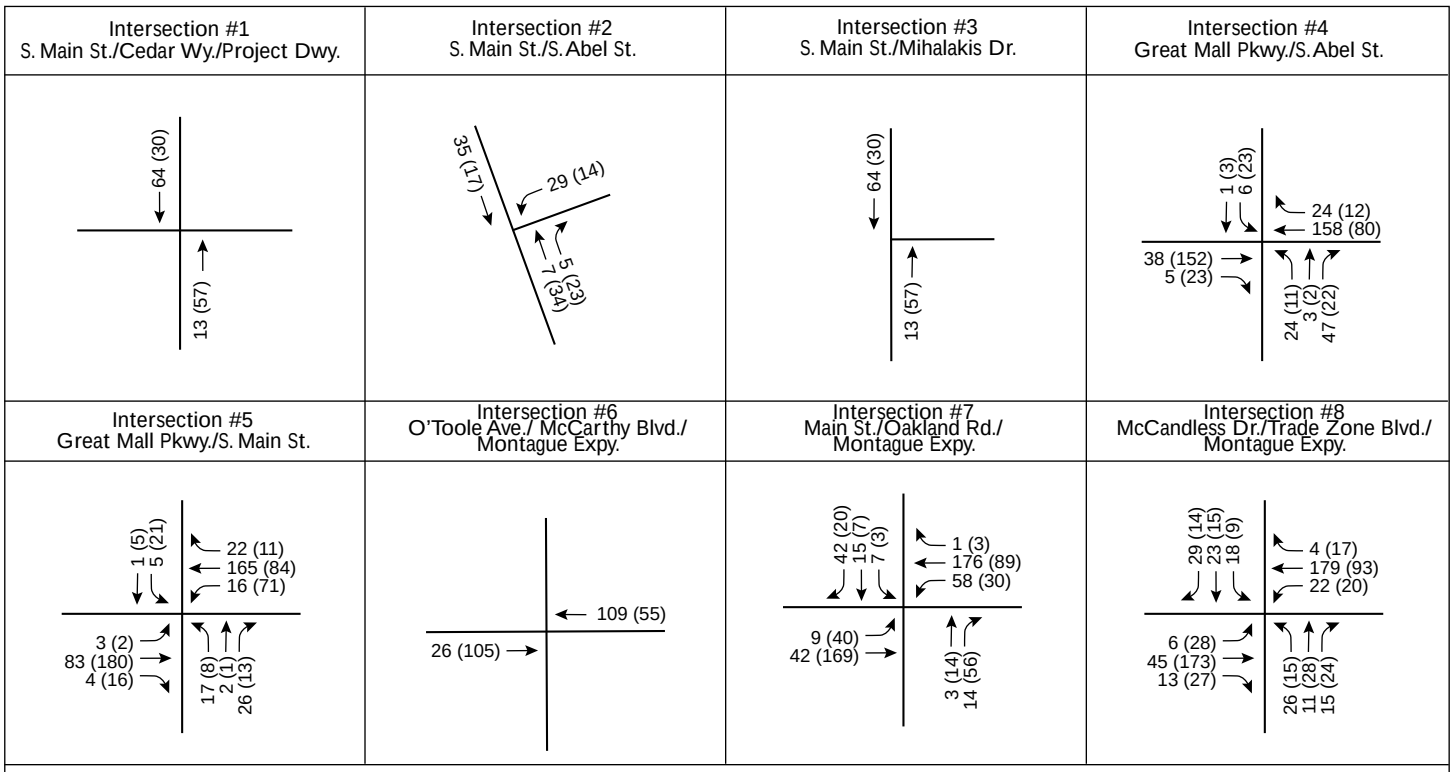
ID	Intersection	Control	Background Conditions							
			A.M. Peak Hour				P.M. Peak Hour			
			Delay	LOS	Critical v/c	Average Critical Delay	Delay	LOS	Critical v/c	Average Critical Delay
1	S. Main Street/ Cedar Way/ Project Driveway	Signal	21.8	C	0.507	24.9	15.1	B	0.514	20.7
2	S. Main Street/ S. Abel Road	Signal	14.8	B	0.250	16.2	12.8	B	0.296	14.9
3	S. Main Street/ Mihalakis Drive	Signal	15.2	B	0.492	21.9	14.0	B	0.526	21.5
4	Great Mall Parkway/ S. Abel Street	Signal	28.6	D	0.958	33.6	22.1	C	0.852	23.3
5	Great Mall Parkway/ S. Main Street	Signal	14.3	B	0.635	12.0	19.9	C	0.739	20.1
6	Montague Expressway/ McCarthy Boulevard/ O'Toole Avenue	Signal	49.8	D	0.991	55.0	73.8	E	1.052	91.5
7	Montague Expressway/ S. Main Street/ Oakland Road	Signal	**122.8**	**F**	1.266	163.6	**133.3**	**F**	1.290	178.4
8	Montague Expressway/ McCandless Drive/ Trade Zone Boulevard	Signal	35.2	D	0.839	39.7	46.9	D	0.972	75.4

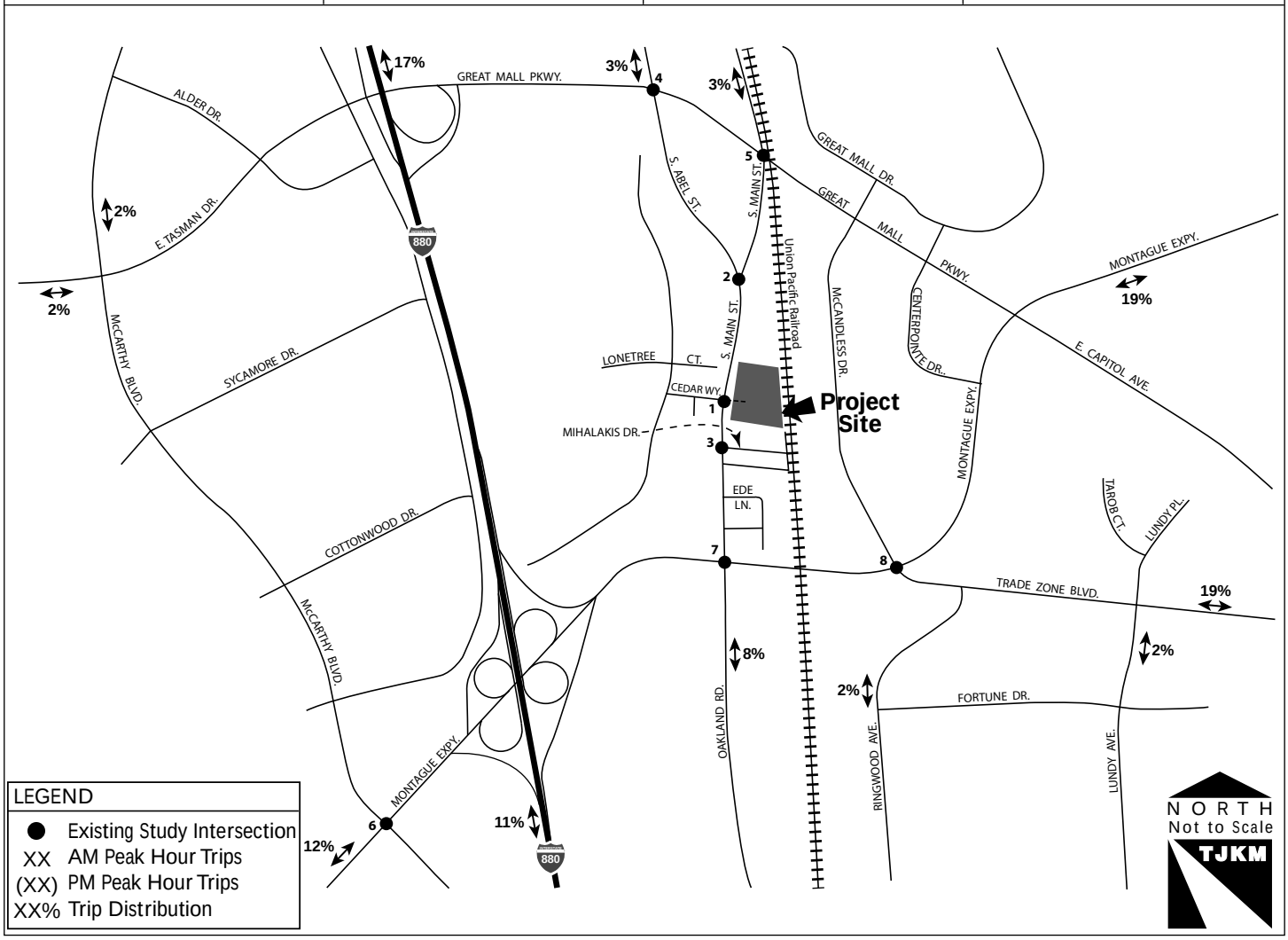
Notes: 1) LOS=Level of Service, Delay = Average control delay per vehicle, v/c = volume to capacity ratio
2) **Bold** indicates LOS exceeds applicable jurisdictional standards for intersection operating conditions.

City of Milpitas - Traffic Impact Analysis for South Main Senior Lifestyles Development

Approved and Pending Projects Trip Assignments

Figure 6





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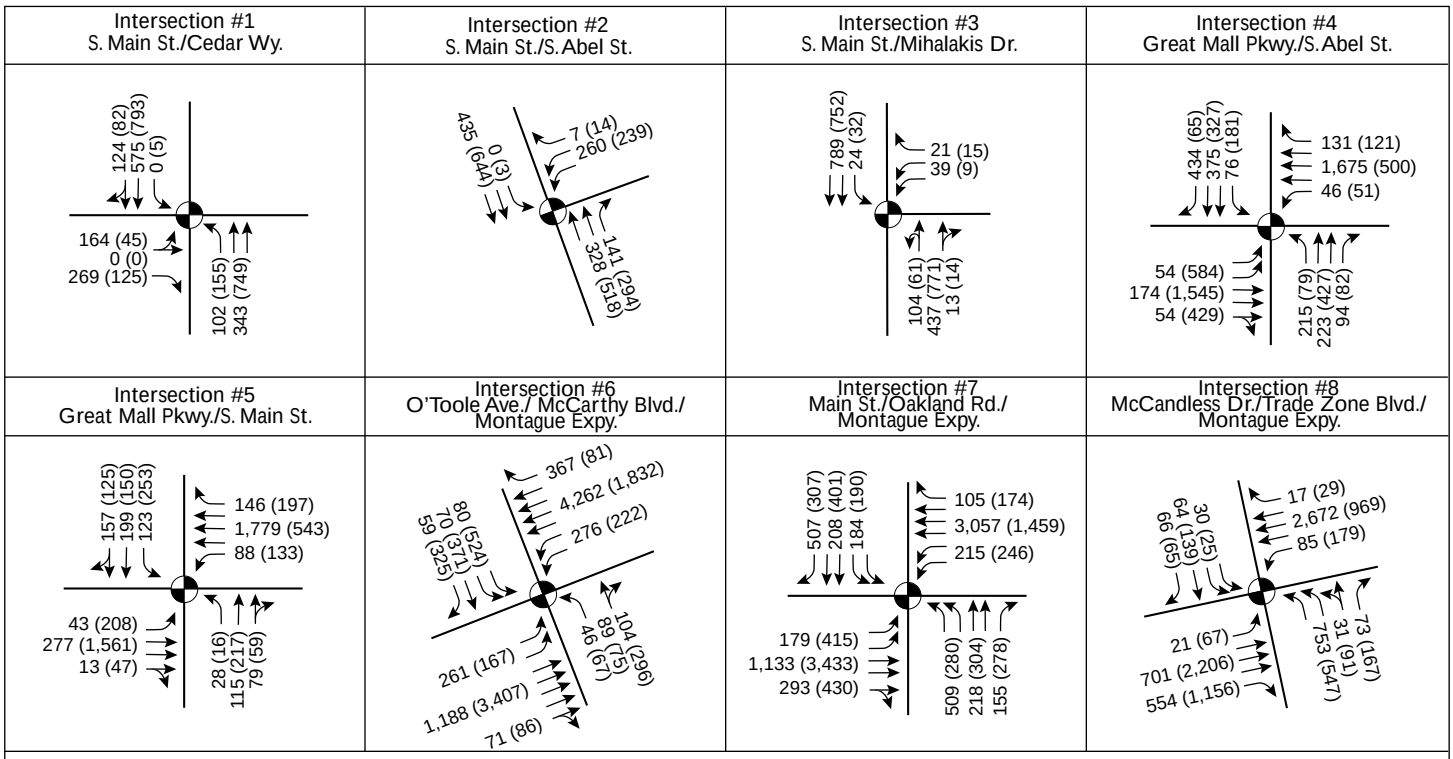
City of Milpitas - Traffic Impact Analysis for South Main Senior Lifestyles Development
Background Conditions Traffic Volumes, Lane Geometry, and Traffic Controls

Figure 7



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Background plus Project Conditions

This analysis scenario is similar to Background Conditions, but with the addition of traffic expected to be generated by the proposed project. This scenario also includes the network improvements assumed under the Background Conditions scenario.

Intersection Level of Service Analysis Results (Background plus Project Conditions)
Table VII shows the results of the LOS analysis conducted for the study intersections under Background Plus Project Conditions. With the addition of project traffic, all project intersections operating at an acceptable LOS under Background Conditions are expected to continue to operate acceptably, with minimal increases to delay. At the Montague Expressway & S. Main Street/Oakland Road intersection, the addition of project traffic is expected to increase the average control delay for critical movements by less than four seconds during the a.m. and p.m. peak hours, which does not constitute a significant impact for intersections already operating at LOS F under Background Conditions.

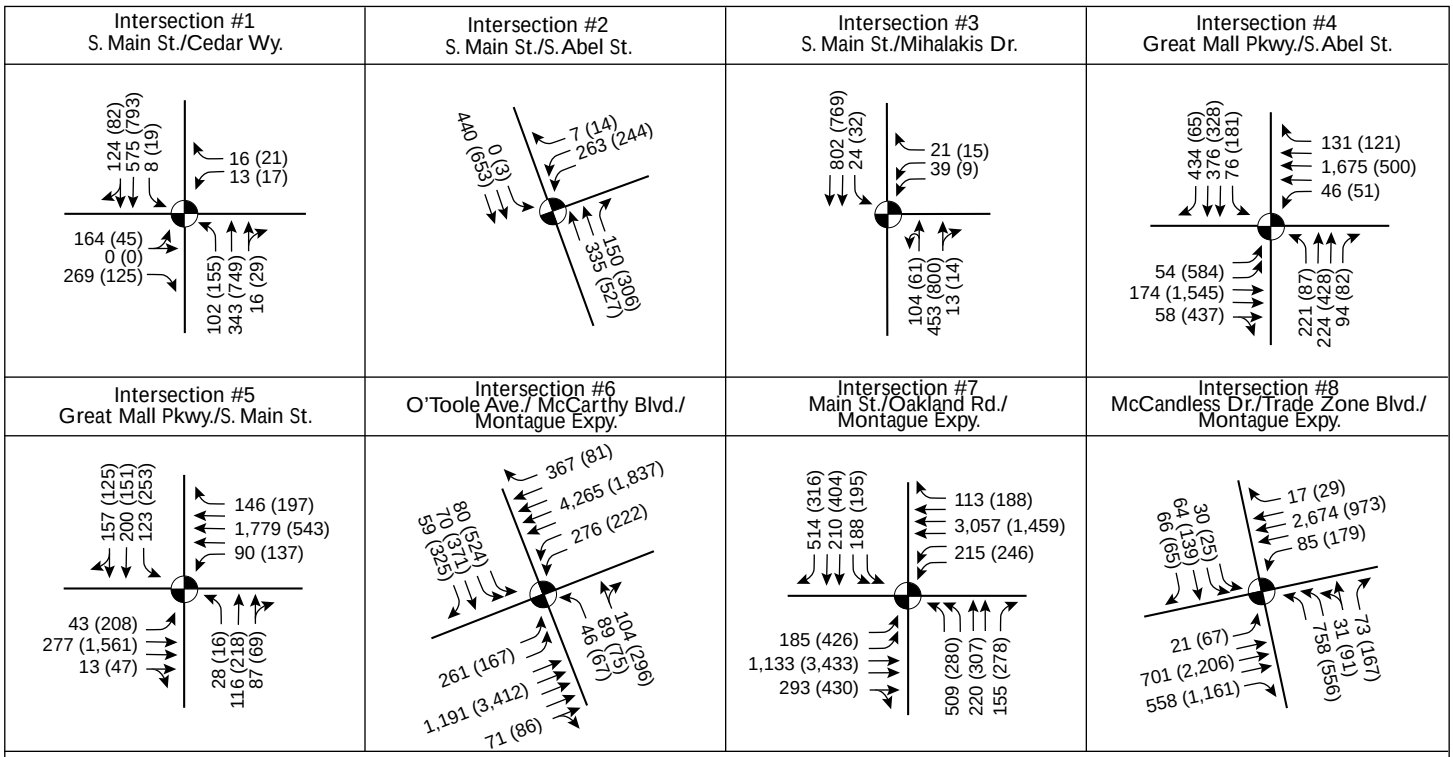
Table VII: Intersection Levels of Service – Background plus Project Conditions

ID	Intersection	Control	Background Conditions								Background Plus Project Conditions							
			A.M. Peak Hour				P.M. Peak Hour				A.M. Peak Hour				P.M. Peak Hour			
			Delay	LOS	Critical v/c	Average Critical Delay	Delay	LOS	Critical v/c	Average Critical Delay	Delay	LOS	Critical v/c	Average Critical Delay	Delay	LOS	Critical v/c	Average Critical Delay
1	S. Main Street/ Cedar Way/ Project Driveway	Signal	21.8	C	0.507	24.9	15.1	B	0.514	20.7	25.1	C	0.532	27.0	18.6	B	0.542	23.1
2	S. Main Street/ S. Abel Road	Signal	14.8	B	0.250	16.2	12.8	B	0.296	14.9	15.0	B	0.256	16.3	12.8	B	0.301	14.9
3	S. Main Street/ Mihalakis Drive	Signal	15.2	B	0.492	21.9	14.0	B	0.526	21.5	15.2	B	0.501	22.0	14.0	B	0.540	21.7
4	Great Mall Parkway/ S. Abel Street	Signal	28.6	D	0.958	33.6	22.1	C	0.852	23.3	29.2	D	0.962	34.4	22.2	C	0.854	23.4
5	Great Mall Parkway/ S. Main Street	Signal	14.3	B	0.635	12.0	19.9	C	0.739	20.1	14.4	B	0.639	12.2	20.1	C	0.746	20.4
6	Montague Expressway/ McCarthy Boulevard/ O'Toole Avenue	Signal	49.8	D	0.991	55.0	73.8	E	1.052	91.5	49.8	D	0.992	55.1	74.0	E	1.053	91.8
7	Montague Expressway/ S. Main Street/ Oakland Road	Signal	**122.8**	**F**	1.266	163.6	**133.3**	**F**	1.290	178.4	**125.2**	**F**	1.233	167.1	**134.8**	**F**	1.296	181.4
8	Montague Expressway/ McCandless Drive/ Trade Zone Boulevard	Signal	35.2	D	0.839	39.7	46.9	D	0.972	75.4	35.2	D	0.837	39.7	47.3	D	0.975	76.2

Notes: 1) LOS=Level of Service, Delay = Average control delay per vehicle, v/c = volume to capacity ratio
2) **Bold** indicates LOS exceeds applicable jurisdictional standards for operating conditions.

City of Milpitas - Traffic Impact Analysis for South Main Senior Lifestyles Development
Background plus Project Conditions Traffic Volumes, Lane Geometry, and Traffic Controls

Figure 8



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Queuing Analysis

TJKM conducted a queuing and vehicle storage analysis at all study intersections for Existing, Existing Plus Project, Background, and Background Plus Project conditions, based on weekday a.m. and p.m. peak hour volumes. The 95th percentile (maximum) queues were analyzed using the HCM 2000 Queue methodology for all left and right-turn pockets where project traffic is expected to be added. Detailed calculations are contained in Appendix C through Appendix F.

Table VIII shows expected vehicle queues for the turn pockets of project access intersections under Existing and Existing Plus Project Conditions. Under Existing Conditions, the following study movements have 95th percentile queue lengths exceeding available storage length:

- Great Mall Parkway & South Abel Street
    - Northbound left-turn during the a.m. peak hour
- Montague Expressway & McCandless Drive/Trade Zone Boulevard
    - Eastbound right-turn during the a.m. and p.m. peak hours

Under Existing plus Project Conditions, with the exception of the westbound left-turn storage pocket at the intersection of South Main Street/Cedar Way, no additional turn pockets are expected to experience spillover conditions with the addition of project traffic. It should be noted that for those movements experiencing spillover conditions under Existing Conditions, the addition of project traffic is expected to increase the 95th percentile queue by no greater than approximately one car length (20-25 feet). For the remaining locations not experiencing spillover conditions, it is expected that the increase in queue lengths can be accommodated by the existing lane geometry without traffic spillover to the closest upstream intersection or into adjacent through lanes. It is therefore expected that the addition of project traffic will not contribute significantly to Existing Plus Project vehicle queues at the study intersections.

It should be noted that the long eastbound right-turn queue at the Montague Expressway & McCandless Drive/Trade Zone Boulevard intersection identified in Table VIII is a function of actual congestion in the eastbound direction of Montague Expressway during the p.m. peak hour. Rolling queues often occur in this direction and from time to time extend upstream to the Montague Expressway / Oakland Road / Main Street intersection. However, this is an existing congested condition that is not due to the proposed project.

Table VIII: Expected Turn Pocket Vehicle Queues – Existing and Existing Plus Project Conditions

Intersection	Movement	Total Storage Length (ft.)	Existing Conditions 95th Percentile Queue Length (ft)		Existing Plus Project Conditions 95th Percentile Queue Length (ft.)	
			AM	PM	AM	PM
S. Main Street/Cedar Way/ Project Driveway	SBL	60	0	22[1]	21	45
	WBL	45	n/a	n/a	44	**52**
S. Main Street/S. Abel Road	NBR	180	98	158	107	172
Great Mall Parkway/S. Abel Street	NBL	175	**230**	99	**236**	110
Great Mall Parkway/S. Main Street	WBL	280	62	67	64	72
Montague Expressway & South Main St/ Oakland Road	SBL	480	189	264	204	328
	EBL	1,015	324	414	334	426
Montague Expressway/McCandless Drive/Trade Zone Boulevard	EBR	235	**425**	**1,891 ***	**428**	**1,915 ***

Note: Vehicle queue lengths expressed in feet per lane.
[1]Queue length reflects traffic navigating a u-turn under Background conditions
* Field observations indicate eastbound queues can extend back to the Montague/South Main/Oakland intersection (approximate 1,395 feet distance), and periodically further upstream of this intersection.

Table IX shows expected vehicle queues for the turn pockets of project intersections under Background and Background Plus Project Conditions. Under Background Conditions, the following study movements are expected to have 95th percentile queue lengths exceeding available storage length:

- Great Mall Parkway & South Abel Street
  - Northbound left-turn during the a.m. peak hour
- Montague Expressway & McCandless Drive/Trade Zone Boulevard
  - Eastbound right-turn during the a.m. and p.m. peak hours

Table IX: Expected Turn Pocket Vehicle Queues – Background and Background Plus Project Conditions

Intersection	Movement	Total Storage Length (ft.)	Background Conditions 95th Percentile Queue Length (ft)		Background Plus Project Conditions 95th Percentile Queue Length (ft.)	
			AM	PM	AM	PM
S. Main Street/Cedar Way/Project Driveway	SBL	60	0	23[1]	21	46
	WBL	45	n/a	n/a	**46**	**53**
S. Main Street/S. Abel Road	NBR	180	104	173	112	182
Great Mall Parkway/S. Abel Street	NBL	175	**257**	114	**264**	125
Great Mall Parkway/S. Main Street	WBL	280	79	139	81	143
Montague Expressway & South Main St/ Oakland Road	SBL	480	221	368	215	374
	EBL	1015	349	458	359	472
Montague Expressway/McCandless Drive/ Trade Zone Boulevard	EBR	235	**499**	**2,179***	**502**	**2,207***

Note: Vehicle queue lengths expressed in feet per lane.
[1]Queue length reflects traffic navigating a u-turn under Background conditions
* Field observations indicate eastbound queues can extend back to the Montague/South Main/Oakland intersection (approximate 1,395 feet distance), and periodically further upstream of this intersection.

Under Background plus Project Conditions, with the exception of the westbound left-turn at the South Main Street/Cedar Way intersection, no additional turn pockets are expected to experience spillover conditions with the addition of project traffic. For those movements experiencing spillover conditions under Background Conditions, the addition of project traffic is expected to increase the 95th percentile queue by no greater than one car length (20-25 feet), with the exception of the eastbound right-turn movement at the Montague Expressway & McCandless Drive/Trade Zone Boulevard intersection, which is expected to experience an increase in the 95th percentile vehicle queue of 28 feet during the p.m. peak hour. These additional queue lengths due to project traffic are not considered significant. It is therefore expected that the addition of project traffic will not contribute significantly to Background Plus Project Conditions vehicle queues at the study intersections.

In terms of improvements to accommodate spillover conditions at the South Main Street/Cedar Way intersection under both Existing plus Project and Background plus Project Conditions, TJKM recommends installing a 60' westbound left-turn pocket (increase of 15') with a corresponding adjustment to the location of the proposed taper. This improvement will may necessitate the removal of two planned on-street parallel parking spaces within the site area.

Project Site Access, Onsite Circulation, and Parking

TJKM reviewed the proposed project site plan to determine adequacy of site access, onsite circulation, and proposed parking. Observations and recommendations are outlined below.

Site Access

The project site plan shows that access to the project site will be provided via extensions of Cedar Way east of South Main Street, as well as a northern extension of Costa Street, which will run adjacent to the project site's eastern boundary before turning west to connect with South Main Street approximately 300 feet north of Cedar Way. The Cedar Way extension is expected to provide access to the first phase of the project, which is comprised of 199 assisted living and congregate care units and includes off-street parking via a subterranean parking garage with a 25-foot entrance. The Costa Street extension will provide primary access for the second phase of the project, which will consist of 190 independent living units and include off-street parking via a four-story garage with a 30-foot wide two-way entrance. Given the relatively low number of a.m. and p.m. peak hour trips that the proposed project is expected to generate, the proposed project trips are not expected to result in queuing issues on South Main Street.

The project site plan also shows a dedicated 20-foot wide roadway running along the site's southern boundary between South Main Street and Costa Street, which will provide access to fire and emergency vehicles. Overall, TJKM expects that the site access as proposed will adequately serve all vehicle types within the project site.

On Site Traffic Circulation

TJKM reviewed the project site layout in terms of internal traffic circulation for autos. The Cedar Way extension includes a proposed two-aisle, one-way passenger loading zone at the main entrance to the Phase 1 component of the development and adjacent to the City of Milpitas right-of-way. The aisles in the loading zone will be constructed with a width of 16-feet, which will adequately accommodate two passenger vehicles in each aisle at a given time.

As mentioned previously, the Costa Street extension will provide access to the site's subterranean (Phase I) and four-story (Phase 2) parking garages. The project site plan shows variable driveway aisle widths ranging from 24-feet to 27-feet in all 90-degree parking areas within the subterranean garage. The City of Milpitas municipal code specifies that a minimum driveway aisle width of 25-feet in all 90-degree parking areas within parking structures. However, the project sponsor has indicated that City staff has allowed for a variance of the minimum required driveway aisle width given constraints pertaining to the nearby right-of-way utility access. Thus, TJKM does not recommend an increase to the driveway aisle widths within the subterranean garage.

Regarding the four-story parking garage, the site plan shows an adequate minimum of 26' for all driveway aisles on the ground floor. It is our understanding that the remaining floors of the parking structure will similarly include 26-foot wide driveway aisles in all 90-degree parking areas. Overall, TJKM expects that the site circulation will adequately serve all vehicles within the site.

Parking

TJKM reviewed the site plan and information received from the project applicant to determine whether the proposed number of off-street parking spaces meets the City of Milpitas requirements. The City of Milpitas Municipal Code requires 391 off-street parking spaces for the proposed number of units of the project. The proposal currently includes 398 off-street parking spaces, including 141 spaces in a subterranean structure under Phase 1, and 257 spaces in a four-story, above-grade parking garage under

Phase 2. Thus, the proposed parking supply is expected to be adequate based on the City of Milpitas Municipal Code requirements.

TJKM additionally consulted ITE's *Parking Generation* 4th edition to estimate the total parking demand for the proposed project based on previous studies of peak period parking demand for comparable land uses. Table X shows the *Parking Generation* 85th percentile ratios for each compatible land use, and compares the estimated number of parking spaces required per the City of Milpitas Municipal Code to the estimated number of parking spaces required per the application of the *Parking Generation* rates. It should be noted that for the Congregate Care land use, *Parking Generation* provides data for only two surveys conducted, and thus does not provide an 85th percentile peak period parking ratio. TJKM therefore applied the larger of the two ratios (0.48) to calculate the total amount of parking required for the Congregate Care land use. The rates provided in *Parking Generation* are consistent with TJKM's experience that Senior Housing, Congregate Care, and Assisted Living land uses typically generate parking demand at a lower rate due to decreased number of residents who typically drive when compared to other residential land uses.

Application of the 85th percentile parking demand rates provided in *Parking Generation* to the proposed project produces a demand estimate of 227 parked vehicles, which is 171 fewer than the current proposal of 398 spaces provided, which is typical of senior residences with fewer residents owning vehicles and that also have access to alternative transportation means. Given this characteristic, it should be noted that the project applicant is considering converting the fourth story of the Phase 2 parking structure to a recreation/open space amenity for residents, which would eliminate 65 parking spaces and reduce the total number of parking spaces in the structure to 333. However, even with the elimination of 65 spaces on the fourth story of the parking structure, the proposed parking supply is expected to be adequate based on ITE *Parking Generation* 85th percentile parking demand rates for Senior Housing, Assisted Living, and Congregate Care land uses.

Table X: Proposed Project Off-Street Parking Requirements

Project Component	Number of spaces required per Milpitas Municipal Code	Ratio for each use per Milpitas Municipal Code	*Parking Generation* 85th percentile ratio (vehicles per dwelling unit)	Parking Required per Parking Generation (85th percentile rate)	Proposed Parking	Proposed Parking (Alternate)
190 Senior Housing Units	190	1	0.66	125	255	190
129 Congregate Care Units	129	1	0.48 (largest peak period demand ratio of two sites)	62	141	141
70 Assisted Living Occupied Beds	70	1	0.54	38	0	0
1 Manager's Unit	2	2	-	2	2 (In parking structure)	2 (In parking structure)
Total Units Required	**391**			**227**	**398**	**333**

Conclusions

TJKM has reached the following conclusions regarding the proposed South Main Senior Lifestyles Development in the City of Milpitas:

Project Trip Generation
The proposed South Main Senior Lifestyles Development is expected to generate 53 a.m. peak hour trips and 81 p.m. peak hour trips, after applying all applicable trip discounts.

Existing Conditions
Currently, all study intersections operate at acceptable LOS based on applicable jurisdictional standards during both weekday a.m. and p.m. peak hours, with the exception of the Montague Expressway & South Main Street/Oakland Road intersection, which operates at LOS F during the a.m. and p.m. peak hours.

Existing Plus Project Conditions
With the addition of project traffic, all of the project intersections operating at an acceptable LOS under Existing Conditions are expected to continue to operate acceptably, with minimal increases in average delay. At the Montague Expressway & South Main Street/Oakland Road intersection, the addition of project traffic is expected to increase the average control delay for critical movements by less than four seconds during the a.m. and p.m. peak hours, which does not constitute a significant impact for intersections already operating at LOS F under Existing Conditions.

Background Conditions LOS
With the addition of peak hour traffic from approved and pending projects and the completion of planned improvements to Montague Expressway, the intersection of Montague Expressway & S. Main Street/Oakland Road is expected to operate at LOS F during the a.m. and p.m. peak hours. All other intersections are expected to meet an acceptable LOS based on applicable jurisdictional standards during both the weekday a.m. and p.m. peak hours.

Background plus Project Conditions LOS
With the addition of project traffic, all of the project intersections operating at an acceptable LOS under Background Conditions are expected to continue to operate acceptably, with minimal increases to delay. At the Montague Expressway & S. Main Street/Oakland Road intersection, the addition of project traffic is expected to increase the average control delay for critical movements by less than four seconds during the a.m. and p.m. peak hours, which does not constitute a significant impact for intersections already operating at LOS F under Existing Conditions.

Queue Lengths
An evaluation of 95th percentile (maximum) queue lengths for dedicated left- and right-turn pockets affected by the proposed project was conducted for the Existing and Background Conditions scenarios. For storage lanes already operating deficiently under Existing and Background baseline conditions, the addition of project traffic is expected to increase the 95th percentile queue by less than one car length (20-25 feet), with the exception of the eastbound right-turn at the Montague Expressway & McCandless Drive/Trade Zone Boulevard intersection, which is expected to experience an increase in queue lengths of 28-feet during the p.m. peak hour under Background plus Project conditions. These additional queue lengths due to project traffic are not considered significant. It is therefore expected that the addition of project traffic will not contribute significantly to Existing and Background Conditions vehicle queues at the study intersections. In terms of improvements to accommodate spillover conditions at the South Main Street/Cedar Way intersection under both Existing plus Project and Background plus Project Conditions,

TJKM recommends installing a 60' westbound left-turn pocket (increase of 15') with a corresponding adjustment to the location of the proposed taper. This improvement will may necessitate the removal of two planned on-street parallel parking spaces within the site area.

Site Access

The project site plan shows a 40-foot wide extension of Cedar Way east of South Main Street, which is expected to provide access to the first phase of the project. An additional 24-foot wide Costa Street extension is proposed approximately 310 feet north of the Cedar Way driveway, and is expected to provide primary access to the second phase of the project. Given the relatively low number of a.m. and p.m. peak hour trips that the proposed project is expected to generate, the proposed project trips are not expected to result in queuing issues on South Main Street. An additional 20-foot wide fire and emergency access lane is proposed along the southern boundary of the project site. Overall, TJKM expects that the site access as proposed will adequately serve all vehicle types within the project site.

On Site Traffic Circulation

TJKM reviewed the project site layout in terms of internal traffic circulation for autos, including the two-aisle, one-way passenger loading zone at the main entrance to the Phase 1 building, and driveway aisle widths within the subterranean (Phase 1) garage and the four-story (Phase 2 garage). Based on the site plan and information received from the project applicant, TJKM expects that the site circulation will adequately serve all vehicles within the site.

Parking

TJKM reviewed the site plan and information received from the project applicant to determine whether the proposed number of off-street parking spaces meets the City of Milpitas requirements. The City of Milpitas Municipal Code requires 391 off-street parking spaces for the proposed number of units of the project. The proposal currently includes 398 off-street parking spaces, including 141 spaces in a subterranean structure under Phase 1, and 257 spaces in a four-story garage under Phase 2. Thus, the proposed parking supply is expected to be adequate based on the City of Milpitas Municipal Code requirements.

Application of the 85th percentile parking demand rates provided in *Parking Generation* to the proposed project produces a demand estimate of 227 parked vehicles, which is 171 fewer than the current proposal of 398 spaces provided, which is typical of senior residences with fewer residents owning vehicles and that also have access to alternative transportation means. Given this characteristic, it should be noted that the project applicant is considering converting the fourth story of the Phase 2 parking structure to a recreation/open space amenity for residents, which would eliminate 65 parking spaces and reduce the total number of parking spaces in the structure to 333. However, even with the elimination of 65 spaces on the fourth story of the parking structure, the proposed parking supply is expected to be adequate based on ITE *Parking Generation* 85th percentile parking demand rates for Senior Housing, Assisted Living, and Congregate Care land uses.

Study References

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Traffic Data Collection

Baymetrics, 2013, 2014

Persons Consulted

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References

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- *Milpitas Transit Area Specific Plan, Draft Environmental Impact Report, State Clearinghouse No. 2006032091,* October 2007.
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- *2013 Congestion Management Program.* Santa Clara Valley Transportation Authority, October 2013
- *City of Milpitas General Plan,* City of Milpitas, 1994.

Appendix A – Level of Service Methodology

APPENDIX A
LEVEL OF SERVICE

The description and procedures for calculating capacity and level of service are found in Transportation Research Board, Highway Capacity Manual 2000. Highway Capacity Manual 2000 represents the latest research on capacity and quality of service for transportation facilities.

Quality of service requires quantitative measures to characterize operational conditions within a traffic stream. Level of service is a quality measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience.

Six levels of service are defined for each type of facility that has analysis procedures available. Letters designate each level, from A to F, with level-of-service A representing the best operating conditions and level-of-service F the worst. Each level of service represents a range of operating conditions and the driver's perception of these conditions. Safety is not included in the measures that establish service levels.

A general description of service levels for various types of facilities is shown in Table A-I

Table A-I: Level of Service Description

	Uninterrupted Flow	**Interrupted Flow**
Facility Type	Freeways Multi-lane Highways Two-lane Highways Urban Streets	Signalized Intersections Unsignalized Intersections Two-way Stop Control All-way Stop Control
LOS		
A	Free-flow	Very low delay.
B	Stable flow. Presence of other users noticeable.	Low delay.
C	Stable flow. Comfort and convenience starts to decline.	Acceptable delay.
D	High density stable flow.	Tolerable delay.
E	Unstable flow.	Limit of acceptable delay.
F	Forced or breakdown flow.	Unacceptable delay

Source: Highway Capacity Manual 2000

Urban Streets

The term "urban streets" refers to urban arterials and collectors, including those in downtown areas.

Arterial streets are roads that primarily serve longer through trips. However, providing access to abutting commercial and residential land uses is also an important function of arterials.
Collector streets provide both land access and traffic circulation within residential, commercial and industrial areas. Their access function is more important than that of arterials, and unlike arterials their operation is not always dominated by traffic signals.
Downtown streets are signalized facilities that often resemble arterials. They not only move through traffic but also provide access to local businesses for passenger cars, transit buses, and trucks. Pedestrian conflicts and lane obstructions created by stopping or standing buses, trucks and parking vehicles that cause turbulence in the traffic flow are typical of downtown streets.

The speed of vehicles on urban streets is influenced by three main factors, street environment, interaction among vehicles and traffic control. As a result, these factors also affect quality of service.

The street environment includes the geometric characteristics of the facility, the character of roadside activity and adjacent land uses. Thus, the environment reflects the number and width of lanes, type of median, driveway density, spacing between signalized intersections, existence of parking, level of pedestrian activity and speed limit.

The interaction among vehicles is determined by traffic density, the proportion of trucks and buses, and turning movements. This interaction affects the operation of vehicles at intersections and, to a lesser extent, between signals.

Traffic control (including signals and signs) forces a portion of all vehicles to slow or stop. The delays and speed changes caused by traffic control devices reduce vehicle speeds, however, such controls are needed to establish right-of-way.

The average travel speed for through vehicles along an urban street is the determinant of the operating level of service. The travel speed along a segment, section or entire length of an urban street is dependent on the running speed between signalized intersections and the amount of control delay incurred at signalized intersections.

Level-of-service A describes primarily free-flow operations. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at signalized intersections is minimal.

Level-of-service B describes reasonably unimpeded operations. The ability to maneuver within the traffic stream is only slightly restricted, and control delays at signalized intersections are not significant.

Level-of-service C describes stable operations, however, ability to maneuver and change lanes in midblock location may be more restricted than at level-of-service B. Longer queues, adverse signal coordination, or both may contribute to lower travel speeds.

Level-of-service D borders on a range in which in which small increases in flow may cause substantial increases in delay and decreases in travel speed. Level-of-service D may be due to adverse signal progression, inappropriate signal timing, high volumes, or a combination of these factors.

Level-of-service E is characterized by significant delays and lower travel speeds. Such operations are caused by a combination of adverse progression, high signal density, high volumes, extensive delays at critical intersections, and inappropriate signal timing.

Level-of-service F is characterized by urban street flow at extremely low speeds. Intersection congestion is likely at critical signalized locations, with high delays, high volumes, and extensive queuing.

The methodology to determine level of service stratifies urban streets into four classifications. The classifications are complex, and are related to functional and design categories. Table A-II describes the functional and design categories, while Table A-III relates these to the urban street classification.

Once classified, the urban street is divided into segments for analysis. An urban street segment is a one-way section of street encompassing a series of blocks or links terminating at a signalized intersection. Adjacent segments of urban streets may be combined to form larger street sections, provided that the segments have similar demand flows and characteristics.

Levels of service are related to the average travel speed of vehicles along the urban street segment or section.

Travel times for existing conditions are obtained by field measurements. The maximum-car technique is used. The vehicle is driven at the posted speed limit unless impeded by actual traffic conditions. In the maximum-car technique, a safe level of vehicular operation is maintained by observing proper following distances and by changing speeds at reasonable rates of acceleration and deceleration. The maximum-car technique provides the best base for measuring traffic performance.

An observer records the travel time and locations and duration of delay. The beginning and ending points are the centers of intersections. Delays include times waiting in queues at signalized intersections. The travel speed is determined by dividing the length of the segment by the travel time. Once the travel speed on the arterial is determined, the level of service is found by comparing the speed to the criteria in Table A-IV. Level-of-service criteria vary for the different classifications of urban street, reflecting differences in driver expectations.

Table A-II: Functional and Design Categories for Urban Streets

Criterion	Functional Category	
	Principal Arterial	**Minor Arterial**
Mobility function	Very important	Important
Access function	Very minor	Substantial
Points connected	Freeways, important activity centers, major traffic generators	Principal arterials
Predominant trips served	Relatively long trips between major points and through trips entering, leaving, and passing through city	Trips of moderate length within relatively small geographical areas

Criterion	Design Category			
	High-Speed	**Suburban**	**Intermediate**	**Urban**
Driveway access density	Very low density	Low density	Moderate density	High density
Arterial type	Multilane divided; undivided or two-lane with shoulders	Multilane divided: undivided or two-lane with shoulders	Multilane divided or undivided; one way, two lane	Undivided one way; two way, two or more lanes
Parking	No	No	Some	Usually
Separate left-turn lanes	Yes	Yes	Usually	Some
Signals per mile	0.5 to 2	1 to 5	4 to 10	6 to 12
Speed limits	45 to 55 mph	40 to 45 mph	30 to 40 mph	25 to 35 mph
Pedestrian activity	Very little	Little	Some	Usually
Roadside development	Low density	Low to medium density	Medium to moderate density	High density

Source: Highway Capacity Manual 2000

Table A-III: Urban Street Class based on Function and Design Categories

	Functional Category	
Design Category	**Principal Arterial**	**Minor Arterial**
High-Speed	I	Not applicable
Suburban	II	II
Intermediate	II	III or IV
Urban	III or IV	IV

Source: Highway Capacity Manual 2000

Table A-IV: Urban Street Levels of Service by Class

Urban Street Class	**I**	**II**	**III**	**IV**
Range of Free Flow Speeds (mph)	45 to 55	35 to 45	30 to 35	25 to 35
Typical Free Flow Speed (mph)	50	40	33	30
Level of Service	**Average Travel Speed (mph)**			
A	>42	>35	>30	>25
B	>34	>28	>24	>19
C	>27	>22	>18	>13
D	>21	>17	>14	>9
E	>16	>13	>10	>7
F	≤16	≤13	≤10	≤7

Source: Highway Capacity Manual 2000

Interrupted Flow

One of the more important elements limiting, and often interrupting the flow of traffic on a highway is the intersection. Flow on an interrupted facility is usually dominated by points of fixed operation such as traffic signals, stop and yield signs. These all operate quite differently and have differing impacts on overall flow.

Signalized Intersections

The capacity of a highway is related primarily to the geometric characteristics of the facility, as well as to the composition of the traffic stream on the facility. Geometrics are a fixed, or non-varying, characteristic of a facility.

At the signalized intersection, an additional element is introduced into the concept of capacity: time allocation. A traffic signal essentially allocates time among conflicting traffic movements seeking use of the same physical space. The way in which time is allocated has a significant impact on the operation of the intersection and on the capacity of the intersection and its approaches.

Level of service for signalized intersections is defined in terms of control delay, which is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, traffic and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions, *i. e.,* in the absence of traffic control, geometric delay, any incidents, and any other vehicles. Specifically, level of service criteria for traffic signals are stated in terms of average control delay per vehicle, typically for a 15-minute analysis period. Delay is a complex measure and depends on a number of variables, including the quality of progression, the cycle length, the ratio of green time to cycle length and the volume to capacity ratio for the lane group.

For each intersection analyzed the average control delay per vehicle per approach is determined for the peak hour. A weighted average of control delay per vehicle is then determined for the intersection. A level of service designation is given to the control delay to better describe the level of operation. A description of levels of service for signalized intersections can be found in Table A-V

Table A-V: Description of Level of Service for Signalized Intersections

Level of Service	Description
A	Very low control delay, up to 10 seconds per vehicle. Progression is extremely favorable, and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.
B	Control delay greater than 10 and up to 20 seconds per vehicle. There is good progression or short cycle lengths or both. More vehicles stop causing higher levels of delay.
C	Control delay greater than 20 and up to 35 seconds per vehicle. Higher delays are caused by fair progression or longer cycle lengths or both. Individual cycle failures may begin to appear. Cycle failure occurs when a given green phase doe not serve queued vehicles, and overflow occurs. The number of vehicles stopping is significant, though many still pass through the intersection without stopping.
D	Control delay greater than 35 and up to 55 seconds per vehicle. The influence of congestions becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volumes. Many vehicles stop, the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	Control delay greater than 55 and up to 80 seconds per vehicle. The limit of acceptable delay. High delays usually indicate poor progression, long cycle lengths, and high volumes. Individual cycle failures are frequent.
F	Control delay in excess of 80 seconds per vehicle. Unacceptable to most drivers. Oversaturation, arrival flow rates exceed the capacity of the intersection. Many individual cycle failures. Poor progression and long cycle lengths may also be contributing factors to higher delay.

Source: Highway Capacity Manual 2000

The use of control delay, which may also be referred to as signal delay, was introduced in the 1997 update to the *Highway Capacity Manual*, and represents a departure from previous updates. In the third edition, published in 1985 and the 1994 update to the third edition, delay only included stopped delay. Thus, the level of service criteria listed in Table A-V differs from earlier criteria.

Unsignalized Intersections

The current procedures on unsignalized intersections were first introduced in the 1997 update to the *Highway Capacity Manual* and represent a revision of the methodology published in the 1994 update to the 1985 *Highway Capacity Manual*. The revised procedures use control delay as a measure of effectiveness to determine level of service. Delay is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, traffic and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions, *i. e.,* in the absence of traffic control, geometric delay, any incidents, and any other vehicles. Control delay is the increased time of travel for a vehicle approaching and passing through an unsignalized intersection, compared with a free-flow vehicle if it were not required to slow or stop at the intersection.

Two-Way Stop Controlled Intersections

Two-way stop controlled intersections in which stop signs are used to assign the right-of-way, are the most prevalent type of intersection in the United States. At two-way stop-controlled intersections the stop-controlled approaches are referred as the minor street approaches and can be either public streets or private driveways. The approaches that are not controlled by stop signs are referred to as the major street approaches.

The capacity of movements subject to delay are determined using the "critical gap" method of capacity analysis. Expected average control delay based on movement volume and movement capacity is calculated. A level of service designation is given to the expected control delay for each minor movement. Level of service is not defined for the intersection as a whole. Control delay is the increased time of travel for a vehicle approaching and passing through a stop-controlled intersection, compared with a free-flow vehicle if it were not required

to slow or stop at the intersection. A description of levels of service for two-way stop-controlled intersections is found in Table A-VI.

Table A-VI: Description of Level of Service for Two-Way Stop Controlled Intersections

Level of Service	Description
A	Very low control delay less than 10 seconds per vehicle for each movement subject to delay.
B	Low control delay greater than 10 and up to 15 seconds per vehicle for each movement subject to delay.
C	Acceptable control delay greater than 15 and up to 25 seconds per vehicle for each movement subject to delay.
D	Tolerable control delay greater than 25 and up to 35 seconds per vehicle for each movement subject to delay.
E	Limit of tolerable control delay greater than 35 and up to 50 seconds per vehicle for each movement subject to delay.
F	Unacceptable control delay in excess of 50 seconds per vehicle for each movement subject to delay.

Source: Highway Capacity Manual 2000

Appendix B – Existing Traffic Counts

B.A.Y.M.E.T.R.I.C.S.

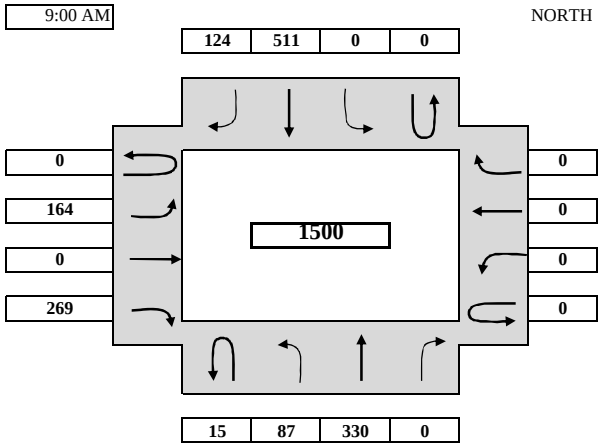
INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN MILPITAS (120613)**	**SURVEY DATE:**	**12/12/2013**	**DAY:**	**THURSDAY**
N-S APPROACH:	**S. MAIN STREET**	**SURVEY TIME:**	**7:00 AM**	**TO**	**9:00 AM**
E-W APPROACH:	**CEDAR WAY**	**JURISDICTION:**	**MILPITAS**	**FILE:**	**3312118-4AM**

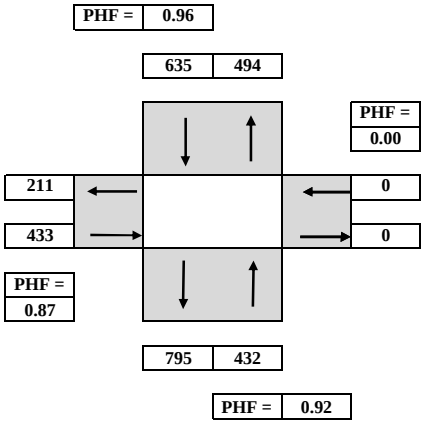
PEAK HOUR

8:00 AM to 9:00 AM

NORTH



ARRIVAL / DEPARTURE VOLUMES



TIME PERIOD From	To	NORTHBOUND U-TURN	LEFT	THRU	RIGHT	SOUTHBOUND U-TURN	LEFT	THRU	RIGHT	EASTBOUND U-TURN	LEFT	THRU	RIGHT	WESTBOUND U-TURN	LEFT	THRU	RIGHT	TOTAL
SURVEY DATA																		
7:00 AM	7:15 AM	0	10	37				42	4		16		41					**150**
7:15 AM	7:30 AM	1	24	86				104	10		30		84					**339**
7:30 AM	7:45 AM	2	40	135				196	25		44		135					**577**
7:45 AM	8:00 AM	5	57	194				305	40		57		200					**858**
8:00 AM	8:15 AM	8	72	275				420	62		82		278					**1197**
8:15 AM	8:30 AM	11	106	356				549	99		118		367					**1606**
8:30 AM	8:45 AM	15	140	431				679	135		168		415					**1983**
8:45 AM	9:00 AM	20	144	524				816	164		221		469					**2358**
TOTAL BY PERIOD																		
7:00 AM	7:15 AM	0	10	37	0	0	0	42	4	0	16	0	41	0	0	0	0	**150**
7:15 AM	7:30 AM	1	14	49	0	0	0	62	6	0	14	0	43	0	0	0	0	**189**
7:30 AM	7:45 AM	1	16	49	0	0	0	92	15	0	14	0	51	0	0	0	0	**238**
7:45 AM	8:00 AM	3	17	59	0	0	0	109	15	0	13	0	65	0	0	0	0	**281**
8:00 AM	8:15 AM	3	15	81	0	0	0	115	22	0	25	0	78	0	0	0	0	**339**
8:15 AM	8:30 AM	3	34	81	0	0	0	129	37	0	36	0	89	0	0	0	0	**409**
8:30 AM	8:45 AM	4	34	75	0	0	0	130	36	0	50	0	48	0	0	0	0	**377**
8:45 AM	9:00 AM	5	4	93	0	0	0	137	29	0	53	0	54	0	0	0	0	**375**
HOURLY TOTALS																		
7:00 AM	8:00 AM	5	57	194	0	0	0	305	40	0	57	0	200	0	0	0	0	**858**
7:15 AM	8:15 AM	8	62	238	0	0	0	378	58	0	66	0	237	0	0	0	0	**1047**
7:30 AM	8:30 AM	10	82	270	0	0	0	445	89	0	88	0	283	0	0	0	0	**1267**
7:45 AM	8:45 AM	13	100	296	0	0	0	483	110	0	124	0	280	0	0	0	0	**1406**
8:00 AM	9:00 AM	15	87	330	0	0	0	511	124	0	164	0	269	0	0	0	0	**1500**

PEAK HOUR SUMMARY

8:00 AM to 9:00 AM	NORTHBOUND NBU	NBL	NBT	NBR	SOUTHBOUND SBU	SBL	SBT	SBR	EASTBOUND EBU	EBL	EBT	EBR	WESTBOUND WBU	WBL	WBT	WBR	TOTAL
VOLUME	15	87	330	0	0	0	511	124	0	164	0	269	0	0	0	0	**1500**
PEDESTRIAN																	**10**
BICYCLE																	**3**
PHF BY MOVEMENT	0.75	0.64	0.89	0.00	0.00	0.00	0.93	0.84	0.00	0.77	0.00	0.76	0.00	0.00	0.00	0.00	OVERALL
PHF BY APPROACH	0.92				0.96				0.87				0.00				0.92

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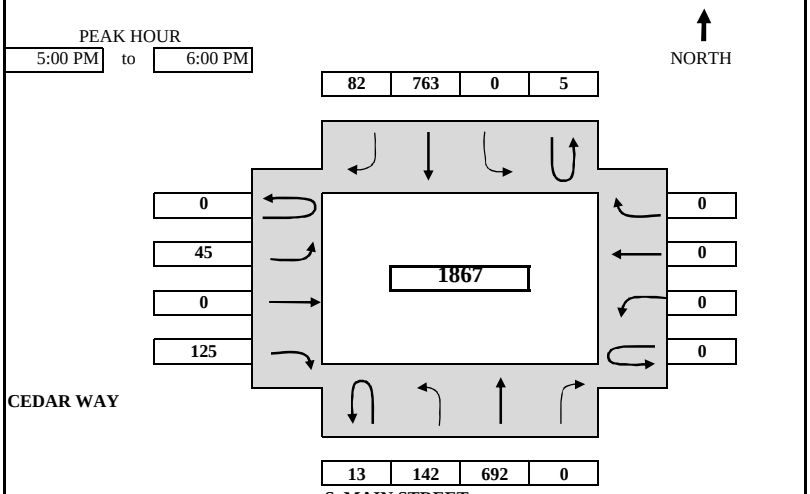
B.A.Y.M.E.T.R.I.C.S.

INTERSECTION TURNING MOVEMENT SUMMARY

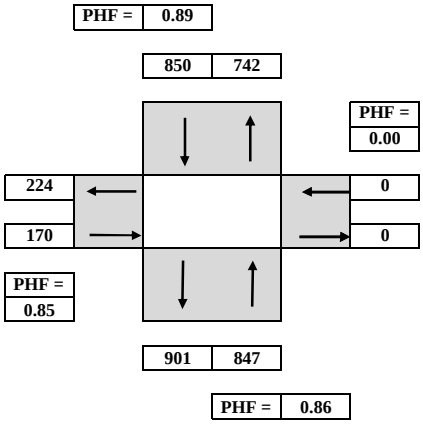
PROJECT:	**TRAFFIC COUNTS IN MILPITAS (120613)**	**SURVEY DATE:**	**12/12/2013**	**DAY:**	**THURSDAY**
N-S APPROACH:	**S. MAIN STREET**	**SURVEY TIME:**	**4:00 PM**	**TO**	**6:00 PM**
E-W APPROACH:	**CEDAR WAY**	**JURISDICTION:**	**MILPITAS**	**FILE:**	**3312118-4PM**

PEAK HOUR

5:00 PM to 6:00 PM



ARRIVAL / DEPARTURE VOLUMES



TIME PERIOD From	To	NORTHBOUND U-TURN	LEFT	THRU	RIGHT	SOUTHBOUND U-TURN	LEFT	THRU	RIGHT	EASTBOUND U-TURN	LEFT	THRU	RIGHT	WESTBOUND U-TURN	LEFT	THRU	RIGHT	TOTAL
SURVEY DATA																		
4:00 PM	4:15 PM	5	33	124		0		117	20		12		20					**331**
4:15 PM	4:30 PM	7	61	243		0		241	37		20		43					**652**
4:30 PM	4:45 PM	13	93	365		0		378	53		39		64					**1005**
4:45 PM	5:00 PM	14	123	516		2		533	66		51		88					**1393**
5:00 PM	5:15 PM	21	152	666		5		711	82		60		118					**1815**
5:15 PM	5:30 PM	21	188	829		6		890	107		66		153					**2260**
5:30 PM	5:45 PM	24	222	1037		7		1108	128		83		186					**2795**
5:45 PM	6:00 PM	27	265	1208		7		1296	148		96		213					**3260**
TOTAL BY PERIOD																		
4:00 PM	4:15 PM	5	33	124	0	0	0	117	20	0	12	0	20	0	0	0	0	**331**
4:15 PM	4:30 PM	2	28	119	0	0	0	124	17	0	8	0	23	0	0	0	0	**321**
4:30 PM	4:45 PM	6	32	122	0	0	0	137	16	0	19	0	21	0	0	0	0	**353**
4:45 PM	5:00 PM	1	30	151	0	2	0	155	13	0	12	0	24	0	0	0	0	**388**
5:00 PM	5:15 PM	7	29	150	0	3	0	178	16	0	9	0	30	0	0	0	0	**422**
5:15 PM	5:30 PM	0	36	163	0	1	0	179	25	0	6	0	35	0	0	0	0	**445**
5:30 PM	5:45 PM	3	34	208	0	1	0	218	21	0	17	0	33	0	0	0	0	**535**
5:45 PM	6:00 PM	3	43	171	0	0	0	188	20	0	13	0	27	0	0	0	0	**465**
HOURLY TOTALS																		
4:00 PM	5:00 PM	14	123	516	0	2	0	533	66	0	51	0	88	0	0	0	0	**1393**
4:15 PM	5:15 PM	16	119	542	0	5	0	594	62	0	48	0	98	0	0	0	0	**1484**
4:30 PM	5:30 PM	14	127	586	0	6	0	649	70	0	46	0	110	0	0	0	0	**1608**
4:45 PM	5:45 PM	11	129	672	0	7	0	730	75	0	44	0	122	0	0	0	0	**1790**
5:00 PM	6:00 PM	13	142	692	0	5	0	763	82	0	45	0	125	0	0	0	0	**1867**

PEAK HOUR SUMMARY

5:00 PM to 6:00 PM	NORTHBOUND NBU	NBL	NBT	NBR	SOUTHBOUND SBU	SBL	SBT	SBR	EASTBOUND EBU	EBL	EBT	EBR	WESTBOUND WBU	WBL	WBT	WBR	TOTAL
VOLUME	13	142	692	0	5	0	763	82	0	45	0	125	0	0	0	0	**1867**
PEDESTRIAN																	**13**
BICYCLE																	**6**
PHF BY MOVEMENT	0.46	0.83	0.83	0.00	0.42	0.00	0.88	0.82	0.00	0.66	0.00	0.89	0.00	0.00	0.00	0.00	OVERALL
PHF BY APPROACH	0.86				0.89				0.85				0.00				0.87

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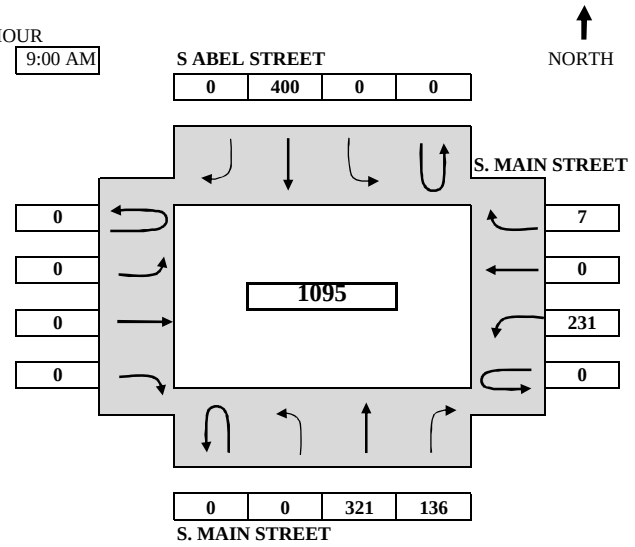
B.A.Y.M.E.T.R.I.C.S.

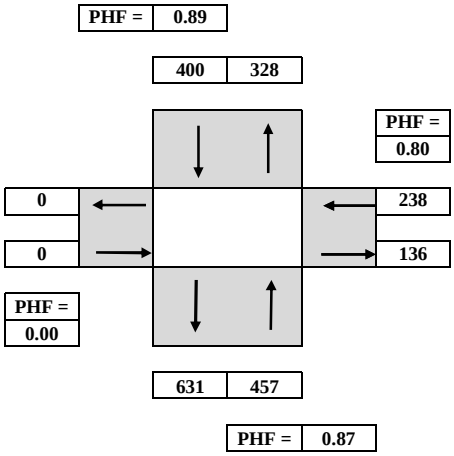
INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN MILPITAS (120613)**	**SURVEY DATE:**	**12/12/2013**	**DAY:**	**THURSDAY**
N-S APPROACH:	**S. MAIN STREET - S ABEL STREET**	**SURVEY TIME:**	**7:00 AM**	**TO**	**9:00 AM**
E-W APPROACH:	**S. MAIN STREET**	**JURISDICTION:**	**MILPITAS**	**FILE:**	**3312118-5AM**

PEAK HOUR
8:00 AM to 9:00 AM



ARRIVAL / DEPARTURE VOLUMES



TIME PERIOD		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From	To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																		
7:00 AM	to 7:15 AM			34	19		0	43							12		1	**109**
7:15 AM	to 7:30 AM			82	32		0	90							33		3	**240**
7:30 AM	to 7:45 AM			120	50		0	171							58		4	**403**
7:45 AM	to 8:00 AM			165	71		0	269							93		5	**603**
8:00 AM	to 8:15 AM			240	91		0	359							155		6	**851**
8:15 AM	to 8:30 AM			309	131		0	471							212		6	**1129**
8:30 AM	to 8:45 AM			409	162		0	576							281		11	**1439**
8:45 AM	to 9:00 AM			486	207		0	669							324		12	**1698**
TOTAL BY PERIOD																		
7:00 AM	to 7:15 AM	0	0	34	19	0	0	43	0	0	0	0	0	0	12	0	1	**109**
7:15 AM	to 7:30 AM	0	0	48	13	0	0	47	0	0	0	0	0	0	21	0	2	**131**
7:30 AM	to 7:45 AM	0	0	38	18	0	0	81	0	0	0	0	0	0	25	0	1	**163**
7:45 AM	to 8:00 AM	0	0	45	21	0	0	98	0	0	0	0	0	0	35	0	1	**200**
8:00 AM	to 8:15 AM	0	0	75	20	0	0	90	0	0	0	0	0	0	62	0	1	**248**
8:15 AM	to 8:30 AM	0	0	69	40	0	0	112	0	0	0	0	0	0	57	0	0	**278**
8:30 AM	to 8:45 AM	0	0	100	31	0	0	105	0	0	0	0	0	0	69	0	5	**310**
8:45 AM	to 9:00 AM	0	0	77	45	0	0	93	0	0	0	0	0	0	43	0	1	**259**
HOURLY TOTALS																		
7:00 AM	to 8:00 AM	0	0	165	71	0	0	269	0	0	0	0	0	0	93	0	5	**603**
7:15 AM	to 8:15 AM	0	0	206	72	0	0	316	0	0	0	0	0	0	143	0	5	**742**
7:30 AM	to 8:30 AM	0	0	227	99	0	0	381	0	0	0	0	0	0	179	0	3	**889**
7:45 AM	to 8:45 AM	0	0	289	112	0	0	405	0	0	0	0	0	0	223	0	7	**1036**
8:00 AM	to 9:00 AM	0	0	321	136	0	0	400	0	0	0	0	0	0	231	0	7	**1095**

PEAK HOUR SUMMARY

8:00 AM to 9:00 AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	
VOLUME	0	0	321	136	0	0	400	0	0	0	0	0	0	231	0	7	**1095**
PEDESTRIAN																	**15**
BICYCLE																	**6**
PHF BY MOVEMENT	0.00	0.00	0.80	0.76	0.00	0.00	0.89	0.00	0.00	0.00	0.00	0.00	0.00	0.84	0.00	0.35	OVERALL
PHF BY APPROACH	0.87				0.89				0.00				0.80				0.88

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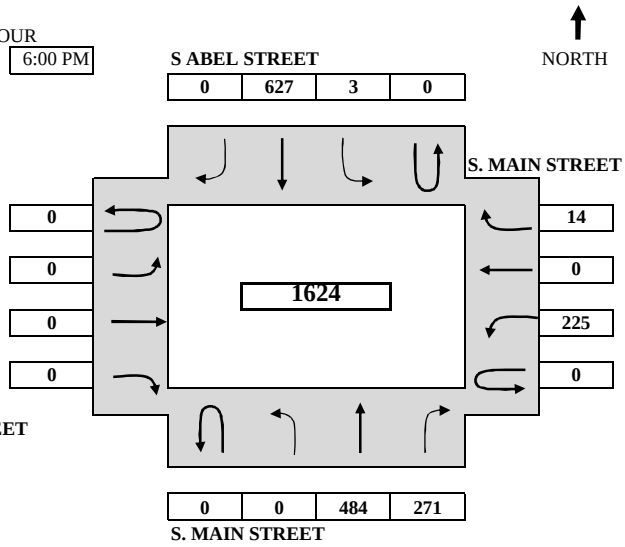
B.A.Y.M.E.T.R.I.C.S.

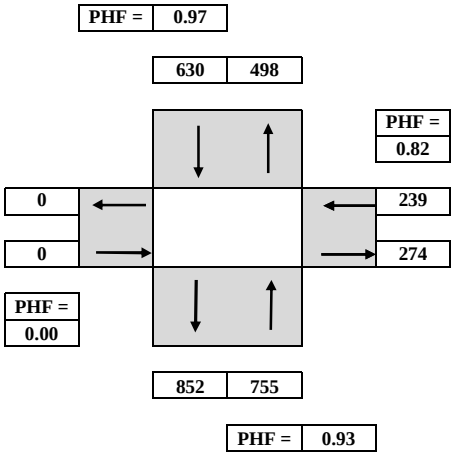
INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN MILPITAS (120613)**	**SURVEY DATE:**	**12/12/2013**	**DAY:**	**THURSDAY**
N-S APPROACH:	**S. MAIN STREET - S ABEL STREET**	**SURVEY TIME:**	**4:00 PM**	**TO**	**6:00 PM**
E-W APPROACH:	**S. MAIN STREET**	**JURISDICTION:**	**MILPITAS**	**FILE:**	**3312118-5PM**

PEAK HOUR
5:00 PM to 6:00 PM



ARRIVAL / DEPARTURE VOLUMES



TIME From	PERIOD To	NORTHBOUND U-TURN	NORTHBOUND LEFT	NORTHBOUND THRU	NORTHBOUND RIGHT	SOUTHBOUND U-TURN	SOUTHBOUND LEFT	SOUTHBOUND THRU	SOUTHBOUND RIGHT	EASTBOUND U-TURN	EASTBOUND LEFT	EASTBOUND THRU	EASTBOUND RIGHT	WESTBOUND U-TURN	WESTBOUND LEFT	WESTBOUND THRU	WESTBOUND RIGHT	TOTAL
SURVEY DATA																		
4:00 PM	4:15 PM			72	54		1	76							33		2	**238**
4:15 PM	4:30 PM			150	102		2	176							75		4	**509**
4:30 PM	4:45 PM			232	164		2	294							131		9	**832**
4:45 PM	5:00 PM			321	209		4	392							166		16	**1108**
5:00 PM	5:15 PM			445	277		4	538							221		19	**1504**
5:15 PM	5:30 PM			557	336		5	696							275		25	**1894**
5:30 PM	5:45 PM			669	412		6	857							344		29	**2317**
5:45 PM	6:00 PM			805	480		7	1019							391		30	**2732**
TOTAL BY PERIOD																		
4:00 PM	4:15 PM	0	0	72	54	0	1	76	0	0	0	0	0	0	33	0	2	**238**
4:15 PM	4:30 PM	0	0	78	48	0	1	100	0	0	0	0	0	0	42	0	2	**271**
4:30 PM	4:45 PM	0	0	82	62	0	0	118	0	0	0	0	0	0	56	0	5	**323**
4:45 PM	5:00 PM	0	0	89	45	0	2	98	0	0	0	0	0	0	35	0	7	**276**
5:00 PM	5:15 PM	0	0	124	68	0	0	146	0	0	0	0	0	0	55	0	3	**396**
5:15 PM	5:30 PM	0	0	112	59	0	1	158	0	0	0	0	0	0	54	0	6	**390**
5:30 PM	5:45 PM	0	0	112	76	0	1	161	0	0	0	0	0	0	69	0	4	**423**
5:45 PM	6:00 PM	0	0	136	68	0	1	162	0	0	0	0	0	0	47	0	1	**415**
HOURLY TOTALS																		
4:00 PM	5:00 PM	0	0	321	209	0	4	392	0	0	0	0	0	0	166	0	16	**1108**
4:15 PM	5:15 PM	0	0	373	223	0	3	462	0	0	0	0	0	0	188	0	17	**1266**
4:30 PM	5:30 PM	0	0	407	234	0	3	520	0	0	0	0	0	0	200	0	21	**1385**
4:45 PM	5:45 PM	0	0	437	248	0	4	563	0	0	0	0	0	0	213	0	20	**1485**
5:00 PM	6:00 PM	0	0	484	271	0	3	627	0	0	0	0	0	0	225	0	14	**1624**

PEAK HOUR SUMMARY

5:00 PM to 6:00 PM	NORTHBOUND NBU	NBL	NBT	NBR	SOUTHBOUND SBU	SBL	SBT	SBR	EASTBOUND EBU	EBL	EBT	EBR	WESTBOUND WBU	WBL	WBT	WBR	TOTAL
VOLUME	0	0	484	271	0	3	627	0	0	0	0	0	0	225	0	14	**1624**
PEDESTRIAN																	**21**
BICYCLE																	**7**
PHF BY MOVEMENT	0.00	0.00	0.89	0.89	0.00	0.75	0.97	0.00	0.00	0.00	0.00	0.00	0.00	0.82	0.00	0.58	OVERALL
PHF BY APPROACH	0.93				0.97				0.00				0.82				0.96

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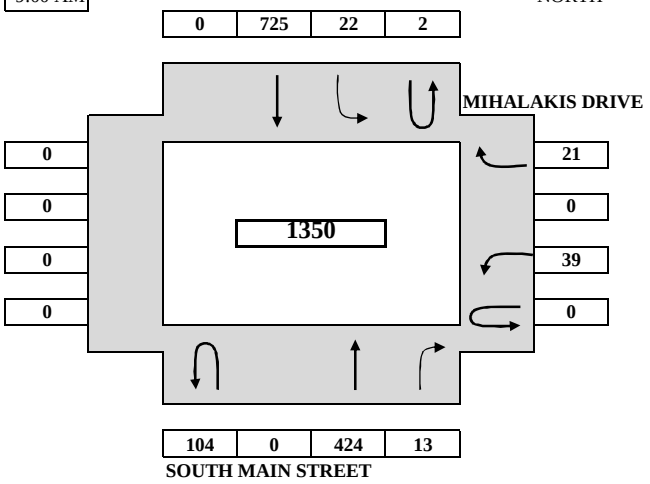
B.A.Y.M.E.T.R.I.C.S.

INTERSECTION TURNING MOVEMENT SUMMARY

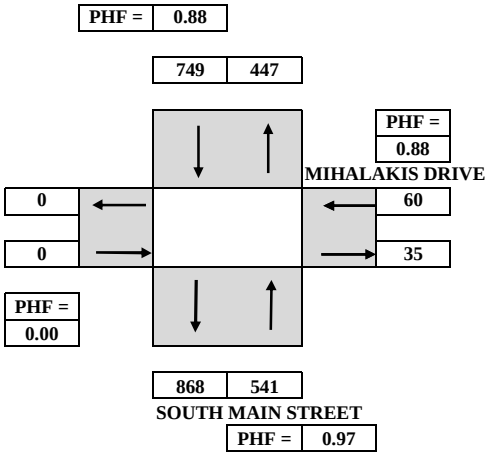
PROJECT:	**TRAFFIC COUNTS IN MILPITAS**	**SURVEY DATE:**	**3/27/2014**	**DAY:**	**THURSDAY**
N-S APPROACH:	**SOUTH MAIN STREET**	**SURVEY TIME:**	**7:00 AM**	**TO**	**9:00 AM**
E-W APPROACH:	**MIHALAKIS DRIVE**	**JURISDICTION:**	**MILPITAS**	**FILE:**	**3403029-AM**

PEAK HOUR
8:00 AM to 9:00 AM

NORTH



ARRIVAL / DEPARTURE VOLUMES



TIME From	PERIOD To	NORTHBOUND U-TURN	NORTHBOUND LEFT	NORTHBOUND THRU	NORTHBOUND RIGHT	SOUTHBOUND U-TURN	SOUTHBOUND LEFT	SOUTHBOUND THRU	SOUTHBOUND RIGHT	EASTBOUND U-TURN	EASTBOUND LEFT	EASTBOUND THRU	EASTBOUND RIGHT	WESTBOUND U-TURN	WESTBOUND LEFT	WESTBOUND THRU	WESTBOUND RIGHT	TOTAL
SURVEY DATA																		
7:00 AM	7:15 AM	11		46	2	0	1	88							8		2	**158**
7:15 AM	7:30 AM	26		94	4	1	2	182							16		6	**331**
7:30 AM	7:45 AM	53		156	7	1	4	310							24		15	**570**
7:45 AM	8:00 AM	74		245	9	2	11	463							32		21	**857**
8:00 AM	8:15 AM	98		347	11	3	14	646							45		24	**1188**
8:15 AM	8:30 AM	124		456	16	3	22	805							55		29	**1510**
8:30 AM	8:45 AM	151		564	19	4	28	979							62		39	**1846**
8:45 AM	9:00 AM	178		669	22	4	33	1188							71		42	**2207**
TOTAL BY PERIOD																		
7:00 AM	7:15 AM	11	0	46	2	0	1	88	0	0	0	0	0	0	8	0	2	**158**
7:15 AM	7:30 AM	15	0	48	2	1	1	94	0	0	0	0	0	0	8	0	4	**173**
7:30 AM	7:45 AM	27	0	62	3	0	2	128	0	0	0	0	0	0	8	0	9	**239**
7:45 AM	8:00 AM	21	0	89	2	1	7	153	0	0	0	0	0	0	8	0	6	**287**
8:00 AM	8:15 AM	24	0	102	2	1	3	183	0	0	0	0	0	0	13	0	3	**331**
8:15 AM	8:30 AM	26	0	109	5	0	8	159	0	0	0	0	0	0	10	0	5	**322**
8:30 AM	8:45 AM	27	0	108	3	1	6	174	0	0	0	0	0	0	7	0	10	**336**
8:45 AM	9:00 AM	27	0	105	3	0	5	209	0	0	0	0	0	0	9	0	3	**361**
HOURLY TOTALS																		
7:00 AM	8:00 AM	74	0	245	9	2	11	463	0	0	0	0	0	0	32	0	21	**857**
7:15 AM	8:15 AM	87	0	301	9	3	13	558	0	0	0	0	0	0	37	0	22	**1030**
7:30 AM	8:30 AM	98	0	362	12	2	20	623	0	0	0	0	0	0	39	0	23	**1179**
7:45 AM	8:45 AM	98	0	408	12	3	24	669	0	0	0	0	0	0	38	0	24	**1276**
8:00 AM	9:00 AM	104	0	424	13	2	22	725	0	0	0	0	0	0	39	0	21	**1350**

PEAK HOUR SUMMARY

8:00 AM to 9:00 AM	NORTHBOUND NBU	NBL	NBT	NBR	SOUTHBOUND SBU	SBL	SBT	SBR	EASTBOUND EBU	EBL	EBT	EBR	WESTBOUND WBU	WBL	WBT	WBR	TOTAL
VOLUME	104	0	424	13	2	22	725	0	0	0	0	0	0	39	0	21	**1350**
PEDESTRIAN																	**25**
BICYCLE																	**2**
PHF BY MOVEMENT	0.96	0.00	0.97	0.65	0.50	0.69	0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.53	OVERALL
PHF BY APPROACH	0.97				0.88				0.00				0.88				0.93

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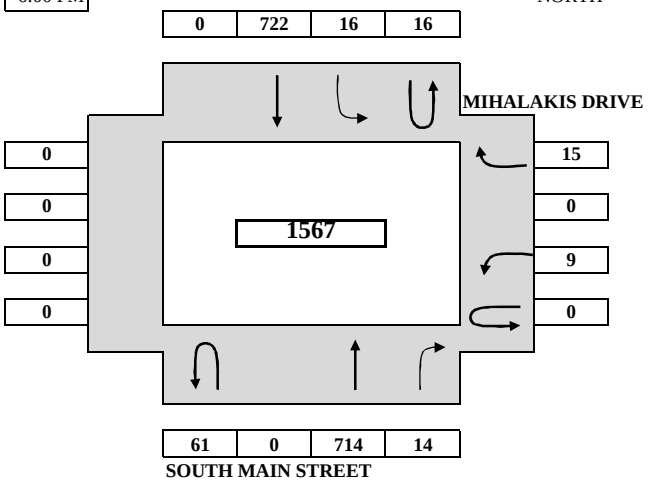
B.A.Y.M.E.T.R.I.C.S.

INTERSECTION TURNING MOVEMENT SUMMARY

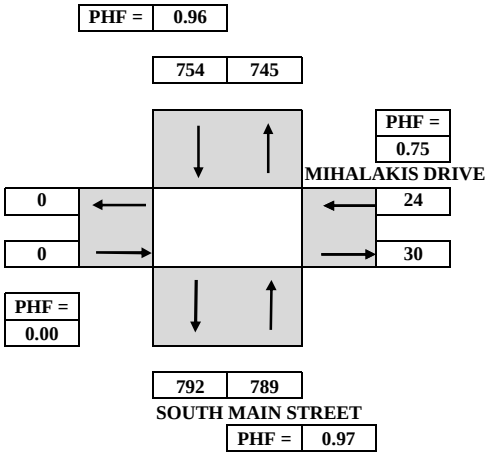
PROJECT:	**TRAFFIC COUNTS IN MILPITAS**	**SURVEY DATE:**	**3/27/2014**	**DAY:**	**THURSDAY**
N-S APPROACH:	**SOUTH MAIN STREET**	**SURVEY TIME:**	**4:00 PM**	**TO**	**6:00 PM**
E-W APPROACH:	**MIHALAKIS DRIVE**	**JURISDICTION:**	**MILPITAS**	**FILE:**	**3403029-PM**

PEAK HOUR
5:00 PM to 6:00 PM

NORTH



ARRIVAL / DEPARTURE VOLUMES



TIME From	PERIOD To	NORTHBOUND U-TURN	NORTHBOUND LEFT	NORTHBOUND THRU	NORTHBOUND RIGHT	SOUTHBOUND U-TURN	SOUTHBOUND LEFT	SOUTHBOUND THRU	SOUTHBOUND RIGHT	EASTBOUND U-TURN	EASTBOUND LEFT	EASTBOUND THRU	EASTBOUND RIGHT	WESTBOUND U-TURN	WESTBOUND LEFT	WESTBOUND THRU	WESTBOUND RIGHT	TOTAL
SURVEY DATA																		
4:00 PM	4:15 PM	15		116	4	2	6	121							4		1	**269**
4:15 PM	4:30 PM	25		263	8	5	12	228							8		3	**552**
4:30 PM	4:45 PM	41		396	10	7	16	360							11		4	**845**
4:45 PM	5:00 PM	57		534	15	9	17	487							15		7	**1141**
5:00 PM	5:15 PM	73		702	17	14	22	650							17		13	**1508**
5:15 PM	5:30 PM	95		878	23	18	26	838							20		15	**1913**
5:30 PM	5:45 PM	105		1068	27	21	30	1020							22		19	**2312**
5:45 PM	6:00 PM	118		1248	29	25	33	1209							24		22	**2708**
TOTAL BY PERIOD																		
4:00 PM	4:15 PM	15	0	116	4	2	6	121	0	0	0	0	0	0	4	0	1	**269**
4:15 PM	4:30 PM	10	0	147	4	3	6	107	0	0	0	0	0	0	4	0	2	**283**
4:30 PM	4:45 PM	16	0	133	2	2	4	132	0	0	0	0	0	0	3	0	1	**293**
4:45 PM	5:00 PM	16	0	138	5	2	1	127	0	0	0	0	0	0	4	0	3	**296**
5:00 PM	5:15 PM	16	0	168	2	5	5	163	0	0	0	0	0	0	2	0	6	**367**
5:15 PM	5:30 PM	22	0	176	6	4	4	188	0	0	0	0	0	0	3	0	2	**405**
5:30 PM	5:45 PM	10	0	190	4	3	4	182	0	0	0	0	0	0	2	0	4	**399**
5:45 PM	6:00 PM	13	0	180	2	4	3	189	0	0	0	0	0	0	2	0	3	**396**
HOURLY TOTALS																		
4:00 PM	5:00 PM	57	0	534	15	9	17	487	0	0	0	0	0	0	15	0	7	**1141**
4:15 PM	5:15 PM	58	0	586	13	12	16	529	0	0	0	0	0	0	13	0	12	**1239**
4:30 PM	5:30 PM	70	0	615	15	13	14	610	0	0	0	0	0	0	12	0	12	**1361**
4:45 PM	5:45 PM	64	0	672	17	14	14	660	0	0	0	0	0	0	11	0	15	**1467**
5:00 PM	6:00 PM	61	0	714	14	16	16	722	0	0	0	0	0	0	9	0	15	**1567**

PEAK HOUR SUMMARY

5:00 PM to 6:00 PM	NORTHBOUND NBU	NBL	NBT	NBR	SOUTHBOUND SBU	SBL	SBT	SBR	EASTBOUND EBU	EBL	EBT	EBR	WESTBOUND WBU	WBL	WBT	WBR	TOTAL
VOLUME	61	0	714	14	16	16	722	0	0	0	0	0	0	9	0	15	**1567**
PEDESTRIAN																	**19**
BICYCLE																	**2**
PHF BY MOVEMENT	0.69	0.00	0.94	0.58	0.80	0.80	0.96	0.00	0.00	0.00	0.00	0.00	0.00	0.75	0.00	0.63	OVERALL
PHF BY APPROACH	0.97				0.96				0.00				0.75				0.97

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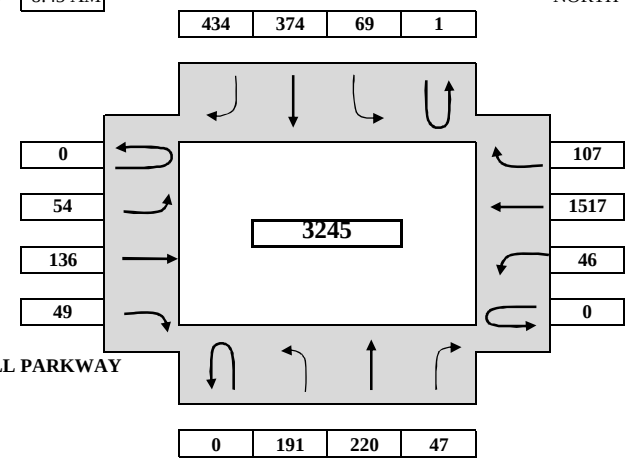
B.A.Y.M.E.T.R.I.C.S.

INTERSECTION TURNING MOVEMENT SUMMARY

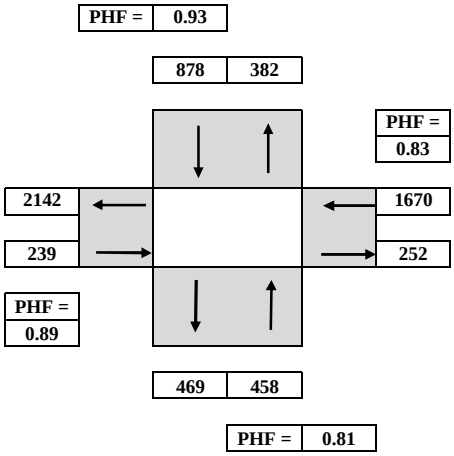
PROJECT:	**MILPITAS TRAFFIC COUNTS**	**SURVEY DATE:**	**5/15/2013**	**DAY:**	**WEDNESDAY**
N-S APPROACH:	**S. ABEL STREET**	**SURVEY TIME:**	**7:00 AM**	**TO**	**9:00 AM**
E-W APPROACH:	**GREAT MALL PARKWAY**	**JURISDICTION:**	**MILPITAS**	**FILE:**	**3305057-3AM**

PEAK HOUR
7:45 AM to 8:45 AM

NORTH



ARRIVAL / DEPARTURE VOLUMES



TIME PERIOD From	To	NORTHBOUND U-TURN	LEFT	THRU	RIGHT	SOUTHBOUND U-TURN	LEFT	THRU	RIGHT	EASTBOUND U-TURN	LEFT	THRU	RIGHT	WESTBOUND U-TURN	LEFT	THRU	RIGHT	TOTAL
SURVEY DATA																		
7:00 AM	7:15 AM		32	40	6	0	4	36	68	0	7	23	14		12	201	12	**455**
7:15 AM	7:30 AM		67	86	14	0	11	78	137	2	20	62	28		16	457	25	**1003**
7:30 AM	7:45 AM		101	169	23	0	22	140	225	2	28	99	35		23	747	41	**1655**
7:45 AM	8:00 AM		137	211	38	0	37	231	339	2	37	133	48		36	1068	69	**2386**
8:00 AM	8:15 AM		171	256	54	0	62	308	429	2	46	170	57		47	1373	92	**3067**
8:15 AM	8:30 AM		232	313	65	1	75	409	549	2	60	205	69		57	1798	121	**3956**
8:30 AM	8:45 AM		292	389	70	1	91	514	659	2	82	235	84		69	2264	148	**4900**
8:45 AM	9:00 AM		349	457	70	1	111	598	736	2	91	262	98		78	2536	179	**5568**
TOTAL BY PERIOD																		
7:00 AM	7:15 AM	0	32	40	6	0	4	36	68	0	7	23	14	0	12	201	12	**455**
7:15 AM	7:30 AM	0	35	46	8	0	7	42	69	2	13	39	14	0	4	256	13	**548**
7:30 AM	7:45 AM	0	34	83	9	0	11	62	88	0	8	37	7	0	7	290	16	**652**
7:45 AM	8:00 AM	0	36	42	15	0	15	91	114	0	9	34	13	0	13	321	28	**731**
8:00 AM	8:15 AM	0	34	45	16	0	25	77	90	0	9	37	9	0	11	305	23	**681**
8:15 AM	8:30 AM	0	61	57	11	1	13	101	120	0	14	35	12	0	10	425	29	**889**
8:30 AM	8:45 AM	0	60	76	5	0	16	105	110	0	22	30	15	0	12	466	27	**944**
8:45 AM	9:00 AM	0	57	68	0	0	20	84	77	0	9	27	14	0	9	272	31	**668**
HOURLY TOTALS																		
7:00 AM	8:00 AM	0	137	211	38	0	37	231	339	2	37	133	48	0	36	1068	69	**2386**
7:15 AM	8:15 AM	0	139	216	48	0	58	272	361	2	39	147	43	0	35	1172	80	**2612**
7:30 AM	8:30 AM	0	165	227	51	1	64	331	412	0	40	143	41	0	41	1341	96	**2953**
7:45 AM	8:45 AM	0	191	220	47	1	69	374	434	0	54	136	49	0	46	1517	107	**3245**
8:00 AM	9:00 AM	0	212	246	32	1	74	367	397	0	54	129	50	0	42	1468	110	**3182**

PEAK HOUR SUMMARY

7:45 AM to 8:45 AM	NORTHBOUND NBU	NBL	NBT	NBR	SOUTHBOUND SBU	SBL	SBT	SBR	EASTBOUND EBU	EBL	EBT	EBR	WESTBOUND WBU	WBL	WBT	WBR	TOTAL
VOLUME	0	191	220	47	1	69	374	434	0	54	136	49	0	46	1517	107	**3245**
PEDESTRIAN																	**10**
BICYCLE																	**28**
PHF BY MOVEMENT	0.00	0.78	0.72	0.73	0.25	0.69	0.89	0.90	0.00	0.61	0.92	0.82	0.00	0.88	0.81	0.92	OVERALL
PHF BY APPROACH	0.81				0.93				0.89				0.83				0.86

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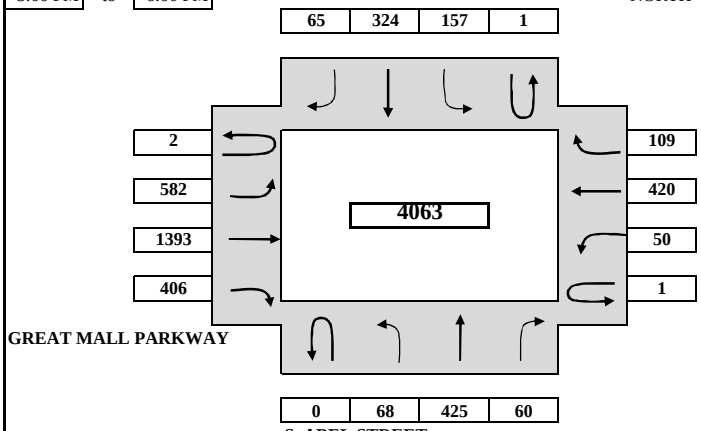
B.A.Y.M.E.T.R.I.C.S.

INTERSECTION TURNING MOVEMENT SUMMARY

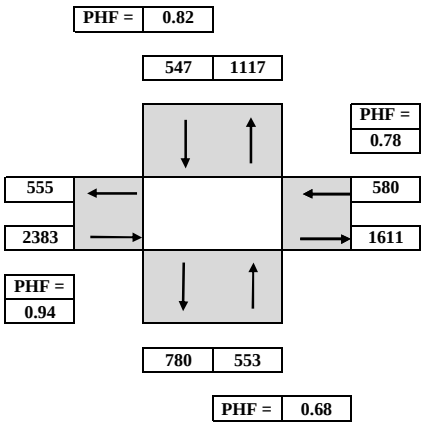
PROJECT:	**MILPITAS TRAFFIC COUNTS**	**SURVEY DATE:**	**5/15/2013**	**DAY:**	**WEDNESDAY**
N-S APPROACH:	**S. ABEL STREET**	**SURVEY TIME:**	**4:00 PM**	**TO**	**6:00 PM**
E-W APPROACH:	**GREAT MALL PARKWAY**	**JURISDICTION:**	**MILPITAS**	**FILE:**	**3305057-3PM**

PEAK HOUR
5:00 PM to 6:00 PM

NORTH



ARRIVAL / DEPARTURE VOLUMES



TIME From		PERIOD To	NORTHBOUND U-TURN	NORTHBOUND LEFT	NORTHBOUND THRU	NORTHBOUND RIGHT	SOUTHBOUND U-TURN	SOUTHBOUND LEFT	SOUTHBOUND THRU	SOUTHBOUND RIGHT	EASTBOUND U-TURN	EASTBOUND LEFT	EASTBOUND THRU	EASTBOUND RIGHT	WESTBOUND U-TURN	WESTBOUND LEFT	WESTBOUND THRU	WESTBOUND RIGHT	TOTAL
SURVEY DATA																			
4:00 PM	to	4:15 PM	0	19	84	20	0	38	52	13	0	49	241	36	1	9	88	22	**672**
4:15 PM	to	4:30 PM	2	33	160	39	0	64	103	34	2	125	498	75	2	17	198	45	**1397**
4:30 PM	to	4:45 PM	2	47	255	51	0	97	178	49	4	214	774	130	2	26	320	78	**2227**
4:45 PM	to	5:00 PM	2	58	335	60	0	123	249	60	5	327	1093	208	2	34	438	104	**3098**
5:00 PM	to	5:15 PM	2	73	436	78	1	168	318	78	5	453	1421	283	2	49	536	129	**4032**
5:15 PM	to	5:30 PM	2	86	531	86	1	211	417	84	7	625	1770	388	2	62	641	149	**5062**
5:30 PM	to	5:45 PM	2	106	690	111	1	252	514	113	7	782	2131	506	3	77	773	188	**6256**
5:45 PM	to	6:00 PM	2	126	760	120	1	280	573	125	7	909	2486	614	3	84	858	213	**7161**
TOTAL BY PERIOD																			
4:00 PM	to	4:15 PM	0	19	84	20	0	38	52	13	0	49	241	36	1	9	88	22	**672**
4:15 PM	to	4:30 PM	2	14	76	19	0	26	51	21	2	76	257	39	1	8	110	23	**725**
4:30 PM	to	4:45 PM	0	14	95	12	0	33	75	15	2	89	276	55	0	9	122	33	**830**
4:45 PM	to	5:00 PM	0	11	80	9	0	26	71	11	1	113	319	78	0	8	118	26	**871**
5:00 PM	to	5:15 PM	0	15	101	18	1	45	69	18	0	126	328	75	0	15	98	25	**934**
5:15 PM	to	5:30 PM	0	13	95	8	0	43	99	6	2	172	349	105	0	13	105	20	**1030**
5:30 PM	to	5:45 PM	0	20	159	25	0	41	97	29	0	157	361	118	1	15	132	39	**1194**
5:45 PM	to	6:00 PM	0	20	70	9	0	28	59	12	0	127	355	108	0	7	85	25	**905**
HOURLY TOTALS																			
4:00 PM	to	5:00 PM	2	58	335	60	0	123	249	60	5	327	1093	208	2	34	438	104	**3098**
4:15 PM	to	5:15 PM	2	54	352	58	1	130	266	65	5	404	1180	247	1	40	448	107	**3360**
4:30 PM	to	5:30 PM	0	53	371	47	1	147	314	50	5	500	1272	313	0	45	443	104	**3665**
4:45 PM	to	5:45 PM	0	59	435	60	1	155	336	64	3	568	1357	376	1	51	453	110	**4029**
5:00 PM	to	6:00 PM	0	68	425	60	1	157	324	65	2	582	1393	406	1	50	420	109	**4063**

PEAK HOUR SUMMARY

5:00 PM to 6:00 PM	NORTHBOUND NBU	NBL	NBT	NBR	SOUTHBOUND SBU	SBL	SBT	SBR	EASTBOUND EBU	EBL	EBT	EBR	WESTBOUND WBU	WBL	WBT	WBR	TOTAL
VOLUME	0	68	425	60	1	157	324	65	2	582	1393	406	1	50	420	109	**4063**
PEDESTRIAN																	**21**
BICYCLE																	**24**
PHF BY MOVEMENT	0.00	0.85	0.67	0.60	0.25	0.87	0.82	0.56	0.25	0.85	0.96	0.86	0.25	0.83	0.80	0.70	OVERALL
PHF BY APPROACH	0.68				0.82				0.94				0.78				0.85

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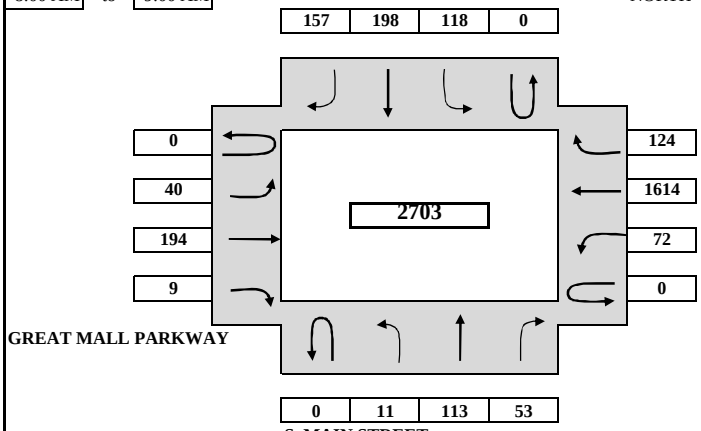
B.A.Y.M.E.T.R.I.C.S.

INTERSECTION TURNING MOVEMENT SUMMARY

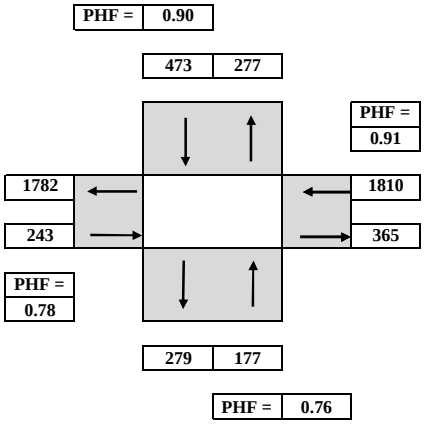
PROJECT:	**MILPITAS TRAFFIC COUNTS**	**SURVEY DATE:**	**5/15/2013**	**DAY:**	**WEDNESDAY**
N-S APPROACH:	**S. MAIN STREET**	**SURVEY TIME:**	**7:00 AM**	**TO**	**9:00 AM**
E-W APPROACH:	**GREAT MALL PARKWAY**	**JURISDICTION:**	**MILPITAS**	**FILE:**	**3305057-4AM**

PEAK HOUR
8:00 AM to 9:00 AM

NORTH



ARRIVAL / DEPARTURE VOLUMES



TIME From	PERIOD To	NORTHBOUND U-TURN	NORTHBOUND LEFT	NORTHBOUND THRU	NORTHBOUND RIGHT	SOUTHBOUND U-TURN	SOUTHBOUND LEFT	SOUTHBOUND THRU	SOUTHBOUND RIGHT	EASTBOUND U-TURN	EASTBOUND LEFT	EASTBOUND THRU	EASTBOUND RIGHT	WESTBOUND U-TURN	WESTBOUND LEFT	WESTBOUND THRU	WESTBOUND RIGHT	TOTAL
SURVEY DATA																		
7:00 AM	7:15 AM		2	4	7		14	7	20		6	25	5		3	186	22	**301**
7:15 AM	7:30 AM		2	21	15		35	35	55		14	65	9		12	430	48	**741**
7:30 AM	7:45 AM		4	46	29		65	58	88		22	113	11		22	751	78	**1287**
7:45 AM	8:00 AM		5	60	39		93	80	121		28	172	12		31	986	98	**1725**
8:00 AM	8:15 AM		8	85	48		132	127	166		46	229	15		52	1332	136	**2376**
8:15 AM	8:30 AM		12	104	61		156	180	196		52	282	17		75	1782	158	**3075**
8:30 AM	8:45 AM		13	133	77		186	247	229		59	325	20		92	2157	184	**3722**
8:45 AM	9:00 AM		16	173	92		211	278	278		68	366	21		103	2600	222	**4428**
TOTAL BY PERIOD																		
7:00 AM	7:15 AM	0	2	4	7	0	14	7	20	0	6	25	5	0	3	186	22	**301**
7:15 AM	7:30 AM	0	0	17	8	0	21	28	35	0	8	40	4	0	9	244	26	**440**
7:30 AM	7:45 AM	0	2	25	14	0	30	23	33	0	8	48	2	0	10	321	30	**546**
7:45 AM	8:00 AM	0	1	14	10	0	28	22	33	0	6	59	1	0	9	235	20	**438**
8:00 AM	8:15 AM	0	3	25	9	0	39	47	45	0	18	57	3	0	21	346	38	**651**
8:15 AM	8:30 AM	0	4	19	13	0	24	53	30	0	6	53	2	0	23	450	22	**699**
8:30 AM	8:45 AM	0	1	29	16	0	30	67	33	0	7	43	3	0	17	375	26	**647**
8:45 AM	9:00 AM	0	3	40	15	0	25	31	49	0	9	41	1	0	11	443	38	**706**
HOURLY TOTALS																		
7:00 AM	8:00 AM	0	5	60	39	0	93	80	121	0	28	172	12	0	31	986	98	**1725**
7:15 AM	8:15 AM	0	6	81	41	0	118	120	146	0	40	204	10	0	49	1146	114	**2075**
7:30 AM	8:30 AM	0	10	83	46	0	121	145	141	0	38	217	8	0	63	1352	110	**2334**
7:45 AM	8:45 AM	0	9	87	48	0	121	189	141	0	37	212	9	0	70	1406	106	**2435**
8:00 AM	9:00 AM	0	11	113	53	0	118	198	157	0	40	194	9	0	72	1614	124	**2703**

PEAK HOUR SUMMARY

8:00 AM to 9:00 AM	NORTHBOUND NBU	NBL	NBT	NBR	SOUTHBOUND SBU	SBL	SBT	SBR	EASTBOUND EBU	EBL	EBT	EBR	WESTBOUND WBU	WBL	WBT	WBR	TOTAL
VOLUME	0	11	113	53	0	118	198	157	0	40	194	9	0	72	1614	124	**2703**
PEDESTRIAN																	**15**
BICYCLE																	**23**
PHF BY MOVEMENT	0.00	0.69	0.71	0.83	0.00	0.76	0.74	0.80	0.00	0.56	0.85	0.75	0.00	0.78	0.90	0.82	OVERALL
PHF BY APPROACH	0.76				0.90				0.78				0.91				0.96

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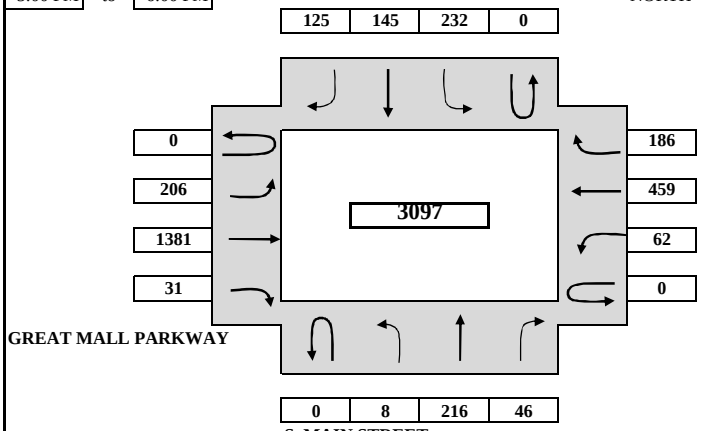
B.A.Y.M.E.T.R.I.C.S.

INTERSECTION TURNING MOVEMENT SUMMARY

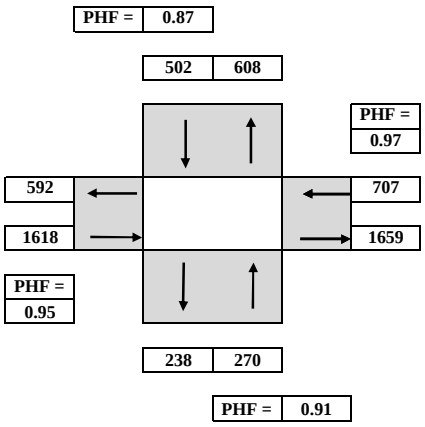
PROJECT:	**MILPITAS TRAFFIC COUNTS**	**SURVEY DATE:**	**5/15/2013**	**DAY:**	**WEDNESDAY**
N-S APPROACH:	**S. MAIN STREET**	**SURVEY TIME:**	**4:00 PM**	**TO**	**6:00 PM**
E-W APPROACH:	**GREAT MALL PARKWAY**	**JURISDICTION:**	**MILPITAS**	**FILE:**	**3305057-4PM**

PEAK HOUR
5:00 PM to 6:00 PM

NORTH



ARRIVAL / DEPARTURE VOLUMES



TIME From		PERIOD To	NORTHBOUND U-TURN	NORTHBOUND LEFT	NORTHBOUND THRU	NORTHBOUND RIGHT	SOUTHBOUND U-TURN	SOUTHBOUND LEFT	SOUTHBOUND THRU	SOUTHBOUND RIGHT	EASTBOUND U-TURN	EASTBOUND LEFT	EASTBOUND THRU	EASTBOUND RIGHT	WESTBOUND U-TURN	WESTBOUND LEFT	WESTBOUND THRU	WESTBOUND RIGHT	TOTAL
SURVEY DATA																			
4:00 PM	to	4:15 PM		1	36	16		54	32	32		43	261	2		12	104	26	**619**
4:15 PM	to	4:30 PM		2	66	29		86	64	69		84	536	9		31	207	61	**1244**
4:30 PM	to	4:45 PM		3	119	48		148	94	105		124	829	10		42	332	111	**1965**
4:45 PM	to	5:00 PM		5	152	56		190	112	142		161	1146	17		57	434	152	**2624**
5:00 PM	to	5:15 PM		5	204	66		270	149	170		205	1485	25		76	536	212	**3403**
5:15 PM	to	5:30 PM		7	266	72		324	190	200		248	1835	32		90	649	261	**4174**
5:30 PM	to	5:45 PM		10	311	88		383	231	242		304	2203	36		101	781	301	**4991**
5:45 PM	to	6:00 PM		13	368	102		422	257	267		367	2527	48		119	893	338	**5721**
TOTAL BY PERIOD																			
4:00 PM	to	4:15 PM	0	1	36	16	0	54	32	32	0	43	261	2	0	12	104	26	**619**
4:15 PM	to	4:30 PM	0	1	30	13	0	32	32	37	0	41	275	7	0	19	103	35	**625**
4:30 PM	to	4:45 PM	0	1	53	19	0	62	30	36	0	40	293	1	0	11	125	50	**721**
4:45 PM	to	5:00 PM	0	2	33	8	0	42	18	37	0	37	317	7	0	15	102	41	**659**
5:00 PM	to	5:15 PM	0	0	52	10	0	80	37	28	0	44	339	8	0	19	102	60	**779**
5:15 PM	to	5:30 PM	0	2	62	6	0	54	41	30	0	43	350	7	0	14	113	49	**771**
5:30 PM	to	5:45 PM	0	3	45	16	0	59	41	42	0	56	368	4	0	11	132	40	**817**
5:45 PM	to	6:00 PM	0	3	57	14	0	39	26	25	0	63	324	12	0	18	112	37	**730**
HOURLY TOTALS																			
4:00 PM	to	5:00 PM	0	5	152	56	0	190	112	142	0	161	1146	17	0	57	434	152	**2624**
4:15 PM	to	5:15 PM	0	4	168	50	0	216	117	138	0	162	1224	23	0	64	432	186	**2784**
4:30 PM	to	5:30 PM	0	5	200	43	0	238	126	131	0	164	1299	23	0	59	442	200	**2930**
4:45 PM	to	5:45 PM	0	7	192	40	0	235	137	137	0	180	1374	26	0	59	449	190	**3026**
5:00 PM	to	6:00 PM	0	8	216	46	0	232	145	125	0	206	1381	31	0	62	459	186	**3097**

PEAK HOUR SUMMARY

5:00 PM to 6:00 PM	NORTHBOUND NBU	NBL	NBT	NBR	SOUTHBOUND SBU	SBL	SBT	SBR	EASTBOUND EBU	EBL	EBT	EBR	WESTBOUND WBU	WBL	WBT	WBR	TOTAL
VOLUME	0	8	216	46	0	232	145	125	0	206	1381	31	0	62	459	186	**3097**
PEDESTRIAN																	**30**
BICYCLE																	**29**
PHF BY MOVEMENT	0.00	0.67	0.87	0.72	0.00	0.73	0.88	0.74	0.00	0.82	0.94	0.65	0.00	0.82	0.87	0.78	OVERALL
PHF BY APPROACH	0.91				0.87				0.95				0.97				0.95

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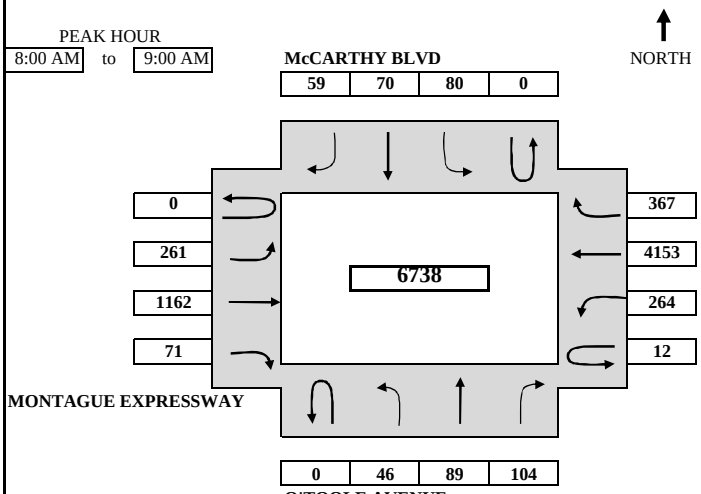
B.A.Y.M.E.T.R.I.C.S.

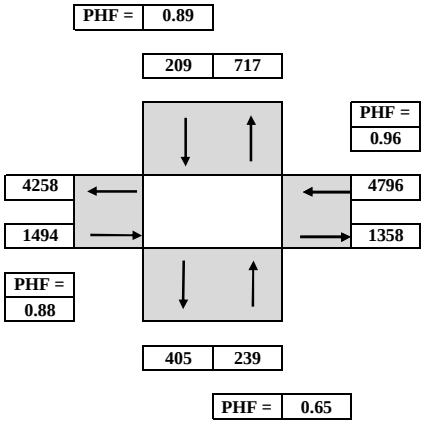
INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN MILPITAS (120613)**	**SURVEY DATE:**	**12/12/2013**	**DAY:**	**THURSDAY**
N-S APPROACH:	**O'TOOLE AVENUE - McCARTHY BLVD**	**SURVEY TIME:**	**7:00 AM**	**TO**	**9:00 AM**
E-W APPROACH:	**MONTAGUE EXPRESSWAY**	**JURISDICTION:**	**MILPITAS**	**FILE:**	**3312118-1AM**

PEAK HOUR 8:00 AM to 9:00 AM



ARRIVAL / DEPARTURE VOLUMES



TIME From	TO	NORTHBOUND U-TURN	NORTHBOUND LEFT	NORTHBOUND THRU	NORTHBOUND RIGHT	SOUTHBOUND U-TURN	SOUTHBOUND LEFT	SOUTHBOUND THRU	SOUTHBOUND RIGHT	EASTBOUND U-TURN	EASTBOUND LEFT	EASTBOUND THRU	EASTBOUND RIGHT	WESTBOUND U-TURN	WESTBOUND LEFT	WESTBOUND THRU	WESTBOUND RIGHT	TOTAL
SURVEY DATA																		
7:00 AM	7:15 AM		9	14	32		11	8	5		33	163	11	2	60	676	84	**1108**
7:15 AM	7:30 AM		24	31	76		28	17	10		65	375	34	4	111	1611	194	**2580**
7:30 AM	7:45 AM		32	45	104		44	30	32		118	632	43	7	166	2681	299	**4233**
7:45 AM	8:00 AM		35	66	138		55	48	43		162	863	65	8	208	3584	403	**5678**
8:00 AM	8:15 AM		40	90	171		74	67	55		220	1213	83	12	281	4550	491	**7347**
8:15 AM	8:30 AM		64	125	204		95	86	74		281	1529	102	14	355	5557	600	**9086**
8:30 AM	8:45 AM		70	138	220		117	103	91		354	1755	125	17	414	6635	703	**10742**
8:45 AM	9:00 AM		81	155	242		135	118	102		423	2025	136	20	472	7737	770	**12416**
TOTAL BY PERIOD																		
7:00 AM	7:15 AM	0	9	14	32	0	11	8	5	0	33	163	11	2	60	676	84	**1108**
7:15 AM	7:30 AM	0	15	17	44	0	17	9	5	0	32	212	23	2	51	935	110	**1472**
7:30 AM	7:45 AM	0	8	14	28	0	16	13	22	0	53	257	9	3	55	1070	105	**1653**
7:45 AM	8:00 AM	0	3	21	34	0	11	18	11	0	44	231	22	1	42	903	104	**1445**
8:00 AM	8:15 AM	0	5	24	33	0	19	19	12	0	58	350	18	4	73	966	88	**1669**
8:15 AM	8:30 AM	0	24	35	33	0	21	19	19	0	61	316	19	2	74	1007	109	**1739**
8:30 AM	8:45 AM	0	6	13	16	0	22	17	17	0	73	226	23	3	59	1078	103	**1656**
8:45 AM	9:00 AM	0	11	17	22	0	18	15	11	0	69	270	11	3	58	1102	67	**1674**
HOURLY TOTALS																		
7:00 AM	8:00 AM	0	35	66	138	0	55	48	43	0	162	863	65	8	208	3584	403	**5678**
7:15 AM	8:15 AM	0	31	76	139	0	63	59	50	0	187	1050	72	10	221	3874	407	**6239**
7:30 AM	8:30 AM	0	40	94	128	0	67	69	64	0	216	1154	68	10	244	3946	406	**6506**
7:45 AM	8:45 AM	0	38	93	116	0	73	73	59	0	236	1123	82	10	248	3954	404	**6509**
8:00 AM	9:00 AM	0	46	89	104	0	80	70	59	0	261	1162	71	12	264	4153	367	**6738**

PEAK HOUR SUMMARY

8:00 AM to 9:00 AM	NORTHBOUND NBU	NBL	NBT	NBR	SOUTHBOUND SBU	SBL	SBT	SBR	EASTBOUND EBU	EBL	EBT	EBR	WESTBOUND WBU	WBL	WBT	WBR	TOTAL
VOLUME	0	46	89	104	0	80	70	59	0	261	1162	71	12	264	4153	367	**6738**
PEDESTRIAN																	**7**
BICYCLE																	**1**
PHF BY MOVEMENT	0.00	0.48	0.64	0.79	0.00	0.91	0.92	0.78	0.00	0.89	0.83	0.77	0.75	0.89	0.94	0.84	OVERALL
PHF BY APPROACH	0.65				0.89				0.88				0.96				0.97

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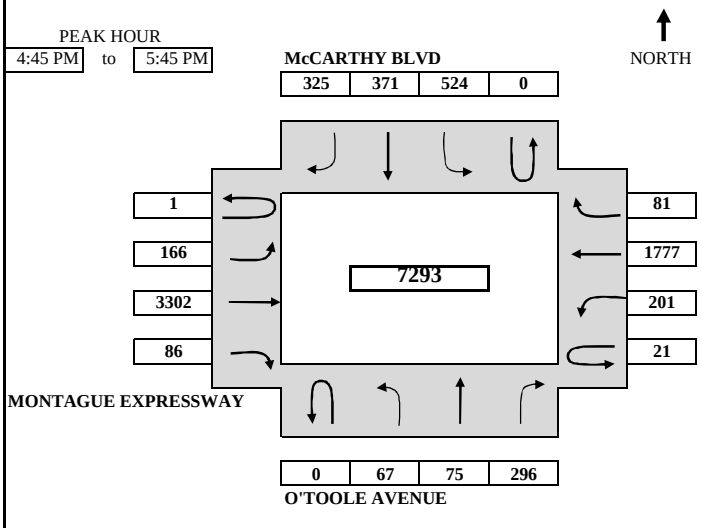
B.A.Y.M.E.T.R.I.C.S.

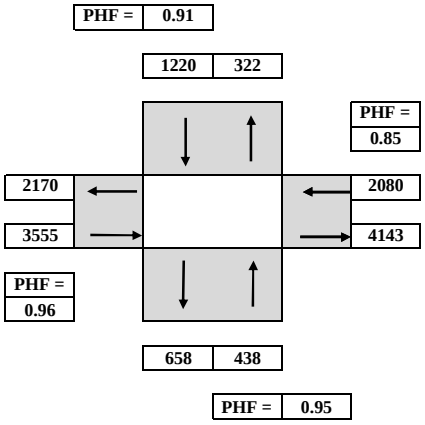
INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN MILPITAS (120613)**	**SURVEY DATE:**	**12/12/2013**	**DAY:**	**THURSDAY**
N-S APPROACH:	**O'TOOLE AVENUE - McCARTHY BLVD**	**SURVEY TIME:**	**4:00 PM**	**TO**	**6:00 PM**
E-W APPROACH:	**MONTAGUE EXPRESSWAY**	**JURISDICTION:**	**MILPITAS**	**FILE:**	**3312118-1PM**

PEAK HOUR 4:45 PM to 5:45 PM



ARRIVAL / DEPARTURE VOLUMES



TIME From		PERIOD To	NORTHBOUND U-TURN	NORTHBOUND LEFT	NORTHBOUND THRU	NORTHBOUND RIGHT	SOUTHBOUND U-TURN	SOUTHBOUND LEFT	SOUTHBOUND THRU	SOUTHBOUND RIGHT	EASTBOUND U-TURN	EASTBOUND LEFT	EASTBOUND THRU	EASTBOUND RIGHT	WESTBOUND U-TURN	WESTBOUND LEFT	WESTBOUND THRU	WESTBOUND RIGHT	TOTAL
SURVEY DATA																			
4:00 PM	to	4:15 PM		12	8	60		120	40	45	2	42	638	10	4	40	343	19	**1383**
4:15 PM	to	4:30 PM		27	21	127		249	95	102	4	84	1520	27	5	84	663	43	**3051**
4:30 PM	to	4:45 PM		45	34	198		371	161	146	7	131	2365	47	7	124	1066	62	**4764**
4:45 PM	to	5:00 PM		64	52	276		509	265	240	7	179	3153	67	13	183	1399	93	**6500**
5:00 PM	to	5:15 PM		78	73	348		643	351	317	8	233	3994	84	18	225	1944	110	**8426**
5:15 PM	to	5:30 PM		103	84	413		757	439	400	8	266	4800	107	24	274	2385	131	**10191**
5:30 PM	to	5:45 PM		112	109	494		895	532	471	8	297	5667	133	28	325	2843	143	**12057**
5:45 PM	to	6:00 PM		120	135	551		1003	593	511	9	321	6224	156	30	364	3147	154	**13318**
TOTAL BY PERIOD																			
4:00 PM	to	4:15 PM	0	12	8	60	0	120	40	45	2	42	638	10	4	40	343	19	**1383**
4:15 PM	to	4:30 PM	0	15	13	67	0	129	55	57	2	42	882	17	1	44	320	24	**1668**
4:30 PM	to	4:45 PM	0	18	13	71	0	122	66	44	3	47	845	20	2	40	403	19	**1713**
4:45 PM	to	5:00 PM	0	19	18	78	0	138	104	94	0	48	788	20	6	59	333	31	**1736**
5:00 PM	to	5:15 PM	0	14	21	72	0	134	86	77	1	54	841	17	5	42	545	17	**1926**
5:15 PM	to	5:30 PM	0	25	11	65	0	114	88	83	0	33	806	23	6	49	441	21	**1765**
5:30 PM	to	5:45 PM	0	9	25	81	0	138	93	71	0	31	867	26	4	51	458	12	**1866**
5:45 PM	to	6:00 PM	0	8	26	57	0	108	61	40	1	24	557	23	2	39	304	11	**1261**
HOURLY TOTALS																			
4:00 PM	to	5:00 PM	0	64	52	276	0	509	265	240	7	179	3153	67	13	183	1399	93	**6500**
4:15 PM	to	5:15 PM	0	66	65	288	0	523	311	272	6	191	3356	74	14	185	1601	91	**7043**
4:30 PM	to	5:30 PM	0	76	63	286	0	508	344	298	4	182	3280	80	19	190	1722	88	**7140**
4:45 PM	to	5:45 PM	0	67	75	296	0	524	371	325	1	166	3302	86	21	201	1777	81	**7293**
5:00 PM	to	6:00 PM	0	56	83	275	0	494	328	271	2	142	3071	89	17	181	1748	61	**6818**

PEAK HOUR SUMMARY

4:45 PM to 5:45 PM	NORTHBOUND NBU	NBL	NBT	NBR	SOUTHBOUND SBU	SBL	SBT	SBR	EASTBOUND EBU	EBL	EBT	EBR	WESTBOUND WBU	WBL	WBT	WBR	TOTAL
VOLUME	0	67	75	296	0	524	371	325	1	166	3302	86	21	201	1777	81	**7293**
PEDESTRIAN																	**6**
BICYCLE																	**4**
PHF BY MOVEMENT	0.00	0.67	0.75	0.91	0.00	0.95	0.89	0.86	0.25	0.77	0.95	0.83	0.88	0.85	0.82	0.65	OVERALL
PHF BY APPROACH	0.95				0.91				0.96				0.85				0.95

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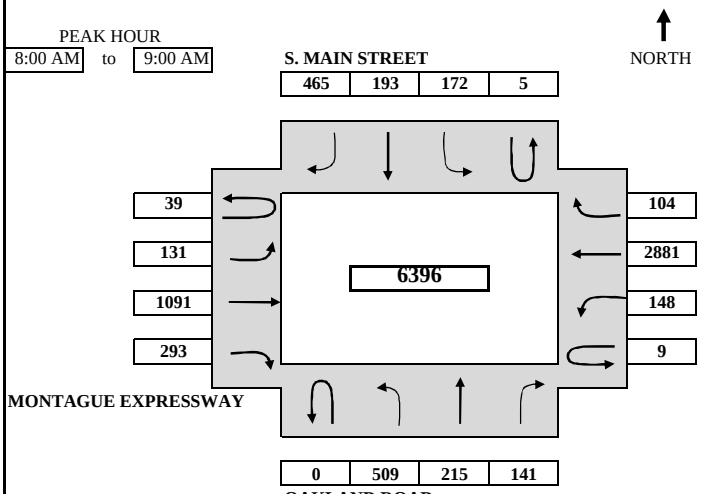
B.A.Y.M.E.T.R.I.C.S.

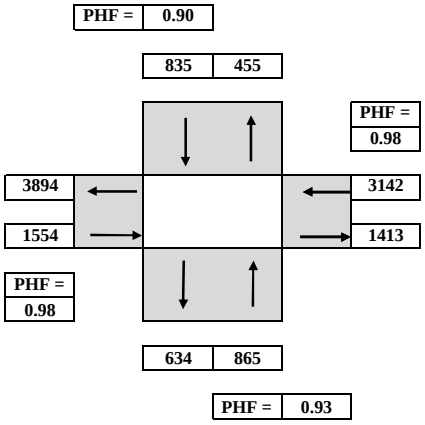
INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN MILPITAS (120613)**	**SURVEY DATE:**	**12/12/2013**	**DAY:**	**THURSDAY**
N-S APPROACH:	**OAKLAND ROAD - S. MAIN STREET**	**SURVEY TIME:**	**7:00 AM**	**TO**	**9:00 AM**
E-W APPROACH:	**MONTAGUE EXPRESSWAY**	**JURISDICTION:**	**MILPITAS**	**FILE:**	**3312118-2AM**

PEAK HOUR
8:00 AM to 9:00 AM



ARRIVAL / DEPARTURE VOLUMES



TIME From		PERIOD To	NORTHBOUND U-TURN	NORTHBOUND LEFT	NORTHBOUND THRU	NORTHBOUND RIGHT	SOUTHBOUND U-TURN	SOUTHBOUND LEFT	SOUTHBOUND THRU	SOUTHBOUND RIGHT	EASTBOUND U-TURN	EASTBOUND LEFT	EASTBOUND THRU	EASTBOUND RIGHT	WESTBOUND U-TURN	WESTBOUND LEFT	WESTBOUND THRU	WESTBOUND RIGHT	TOTAL
SURVEY DATA																			
7:00 AM	to	7:15 AM		82	26	25	3	25	21	82	16	17	177	55	1	29	503	14	**1076**
7:15 AM	to	7:30 AM		173	63	44	5	56	44	184	27	35	387	88	2	63	1233	38	**2442**
7:30 AM	to	7:45 AM		288	96	78	7	100	66	301	39	67	635	136	4	88	1992	54	**3951**
7:45 AM	to	8:00 AM		381	140	108	10	134	111	412	51	100	889	198	6	138	2715	68	**5461**
8:00 AM	to	8:15 AM		491	202	148	12	191	172	516	64	121	1158	265	10	177	3451	82	**7060**
8:15 AM	to	8:30 AM		625	257	191	12	236	216	659	71	157	1441	330	12	210	4188	114	**8719**
8:30 AM	to	8:45 AM		746	302	218	13	261	262	765	79	189	1711	417	13	257	4906	148	**10287**
8:45 AM	to	9:00 AM		890	355	249	15	306	304	877	90	231	1980	491	15	286	5596	172	**11857**
TOTAL BY PERIOD																			
7:00 AM	to	7:15 AM	0	82	26	25	3	25	21	82	16	17	177	55	1	29	503	14	**1076**
7:15 AM	to	7:30 AM	0	91	37	19	2	31	23	102	11	18	210	33	1	34	730	24	**1366**
7:30 AM	to	7:45 AM	0	115	33	34	2	44	22	117	12	32	248	48	2	25	759	16	**1509**
7:45 AM	to	8:00 AM	0	93	44	30	3	34	45	111	12	33	254	62	2	50	723	14	**1510**
8:00 AM	to	8:15 AM	0	110	62	40	2	57	61	104	13	21	269	67	4	39	736	14	**1599**
8:15 AM	to	8:30 AM	0	134	55	43	0	45	44	143	7	36	283	65	2	33	737	32	**1659**
8:30 AM	to	8:45 AM	0	121	45	27	1	25	46	106	8	32	270	87	1	47	718	34	**1568**
8:45 AM	to	9:00 AM	0	144	53	31	2	45	42	112	11	42	269	74	2	29	690	24	**1570**
HOURLY TOTALS																			
7:00 AM	to	8:00 AM	0	381	140	108	10	134	111	412	51	100	889	198	6	138	2715	68	**5461**
7:15 AM	to	8:15 AM	0	409	176	123	9	166	151	434	48	104	981	210	9	148	2948	68	**5984**
7:30 AM	to	8:30 AM	0	452	194	147	7	180	172	475	44	122	1054	242	10	147	2955	76	**6277**
7:45 AM	to	8:45 AM	0	458	206	140	6	161	196	464	40	122	1076	281	9	169	2914	94	**6336**
8:00 AM	to	9:00 AM	0	509	215	141	5	172	193	465	39	131	1091	293	9	148	2881	104	**6396**

PEAK HOUR SUMMARY

8:00 AM to 9:00 AM	NORTHBOUND NBU	NBL	NBT	NBR	SOUTHBOUND SBU	SBL	SBT	SBR	EASTBOUND EBU	EBL	EBT	EBR	WESTBOUND WBU	WBL	WBT	WBR	TOTAL
VOLUME	0	509	215	141	5	172	193	465	39	131	1091	293	9	148	2881	104	**6396**
PEDESTRIAN																	**3**
BICYCLE																	**7**
PHF BY MOVEMENT	0.00	0.88	0.87	0.82	0.63	0.75	0.79	0.81	0.75	0.78	0.96	0.84	0.56	0.79	0.98	0.76	OVERALL
PHF BY APPROACH	0.93				0.90				0.98				0.98				0.96

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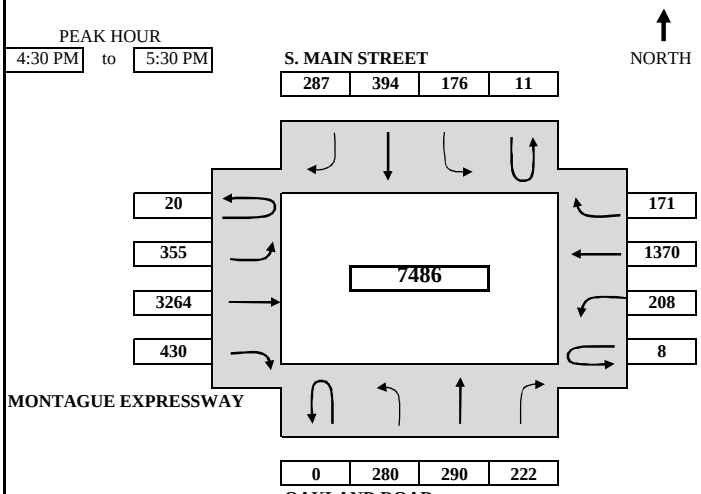
B.A.Y.M.E.T.R.I.C.S.

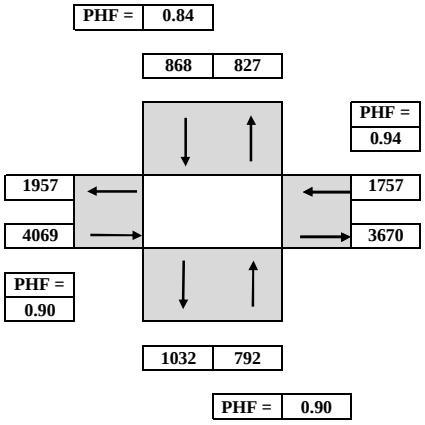
INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN MILPITAS (120613)**	**SURVEY DATE:**	**12/12/2013**	**DAY:**	**THURSDAY**
N-S APPROACH:	**OAKLAND ROAD - S. MAIN STREET**	**SURVEY TIME:**	**4:00 PM**	**TO**	**6:00 PM**
E-W APPROACH:	**MONTAGUE EXPRESSWAY**	**JURISDICTION:**	**MILPITAS**	**FILE:**	**3312118-2PM**

PEAK HOUR 4:30 PM to 5:30 PM



ARRIVAL / DEPARTURE VOLUMES



TIME From		PERIOD To	NORTHBOUND U-TURN	NORTHBOUND LEFT	NORTHBOUND THRU	NORTHBOUND RIGHT	SOUTHBOUND U-TURN	SOUTHBOUND LEFT	SOUTHBOUND THRU	SOUTHBOUND RIGHT	EASTBOUND U-TURN	EASTBOUND LEFT	EASTBOUND THRU	EASTBOUND RIGHT	WESTBOUND U-TURN	WESTBOUND LEFT	WESTBOUND THRU	WESTBOUND RIGHT	TOTAL
SURVEY DATA																			
4:00 PM	to	4:15 PM		75	83	48	2	50	64	55	4	73	604	104	2	29	336	29	**1558**
4:15 PM	to	4:30 PM		133	126	83	3	86	119	147	11	142	1253	182	3	55	560	61	**2964**
4:30 PM	to	4:45 PM		213	183	142	5	120	210	187	16	220	2020	268	6	97	882	101	**4670**
4:45 PM	to	5:00 PM		274	231	195	8	160	301	249	20	310	2805	375	7	154	1212	138	**6439**
5:00 PM	to	5:15 PM		351	317	245	12	210	402	342	27	402	3607	492	8	199	1587	185	**8386**
5:15 PM	to	5:30 PM		413	416	305	14	262	513	434	31	497	4517	612	11	263	1930	232	**10450**
5:30 PM	to	5:45 PM		435	513	331	18	299	620	523	39	581	5099	695	17	301	2169	257	**11897**
5:45 PM	to	6:00 PM		497	578	357	23	348	739	577	51	645	5740	788	22	341	2437	294	**13437**
TOTAL BY PERIOD																			
4:00 PM	to	4:15 PM	0	75	83	48	2	50	64	55	4	73	604	104	2	29	336	29	**1558**
4:15 PM	to	4:30 PM	0	58	43	35	1	36	55	92	7	69	649	78	1	26	224	32	**1406**
4:30 PM	to	4:45 PM	0	80	57	59	2	34	91	40	5	78	767	86	3	42	322	40	**1706**
4:45 PM	to	5:00 PM	0	61	48	53	3	40	91	62	4	90	785	107	1	57	330	37	**1769**
5:00 PM	to	5:15 PM	0	77	86	50	4	50	101	93	7	92	802	117	1	45	375	47	**1947**
5:15 PM	to	5:30 PM	0	62	99	60	2	52	111	92	4	95	910	120	3	64	343	47	**2064**
5:30 PM	to	5:45 PM	0	22	97	26	4	37	107	89	8	84	582	83	6	38	239	25	**1447**
5:45 PM	to	6:00 PM	0	62	65	26	5	49	119	54	12	64	641	93	5	40	268	37	**1540**
HOURLY TOTALS																			
4:00 PM	to	5:00 PM	0	274	231	195	8	160	301	249	20	310	2805	375	7	154	1212	138	**6439**
4:15 PM	to	5:15 PM	0	276	234	197	10	160	338	287	23	329	3003	388	6	170	1251	156	**6828**
4:30 PM	to	5:30 PM	0	280	290	222	11	176	394	287	20	355	3264	430	8	208	1370	171	**7486**
4:45 PM	to	5:45 PM	0	222	330	189	13	179	410	336	23	361	3079	427	11	204	1287	156	**7227**
5:00 PM	to	6:00 PM	0	223	347	162	15	188	438	328	31	335	2935	413	15	187	1225	156	**6998**

PEAK HOUR SUMMARY

4:30 PM to 5:30 PM	NORTHBOUND NBU	NBL	NBT	NBR	SOUTHBOUND SBU	SBL	SBT	SBR	EASTBOUND EBU	EBL	EBT	EBR	WESTBOUND WBU	WBL	WBT	WBR	TOTAL
VOLUME	0	280	290	222	11	176	394	287	20	355	3264	430	8	208	1370	171	**7486**
PEDESTRIAN																	**7**
BICYCLE																	**11**
PHF BY MOVEMENT	0.00	0.88	0.73	0.93	0.69	0.85	0.89	0.77	0.71	0.93	0.90	0.90	0.67	0.81	0.91	0.91	OVERALL
PHF BY APPROACH	0.90				0.84				0.90				0.94				0.91

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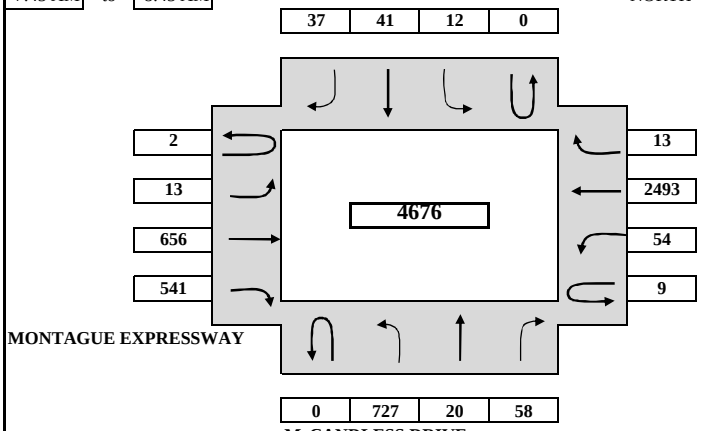
B.A.Y.M.E.T.R.I.C.S.

INTERSECTION TURNING MOVEMENT SUMMARY

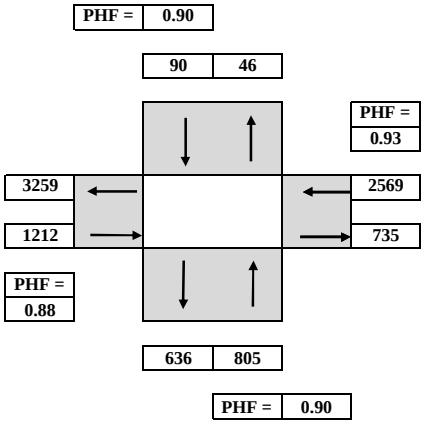
PROJECT:	**MILPITAS TRAFFIC COUNTS**	**SURVEY DATE:**	**5/15/2013**	**DAY:**	**WEDNESDAY**
N-S APPROACH:	**McCANDLESS DRIVE**	**SURVEY TIME:**	**7:00 AM**	**TO**	**9:00 AM**
E-W APPROACH:	**MONTAGUE EXPRESSWAY**	**JURISDICTION:**	**MILPITAS**	**FILE:**	**3305057-9AM**

PEAK HOUR
7:45 AM to 8:45 AM

NORTH



ARRIVAL / DEPARTURE VOLUMES



TIME From		PERIOD To	NORTHBOUND U-TURN	LEFT	THRU	RIGHT	SOUTHBOUND U-TURN	LEFT	THRU	RIGHT	EASTBOUND U-TURN	LEFT	THRU	RIGHT	WESTBOUND U-TURN	LEFT	THRU	RIGHT	TOTAL
SURVEY DATA																			
7:00 AM	to	7:15 AM		160	4	9		0	4	12	0	10	65	90	4	23	493	7	**881**
7:15 AM	to	7:30 AM		294	8	18		1	9	16	0	12	205	216	6	33	1121	14	**1953**
7:30 AM	to	7:45 AM		553	13	29		3	11	22	1	15	363	351	6	50	1777	21	**3215**
7:45 AM	to	8:00 AM		717	19	51		7	24	27	2	18	543	506	8	67	2445	27	**4461**
8:00 AM	to	8:15 AM		916	23	61		10	32	35	3	22	680	622	11	76	2973	29	**5493**
8:15 AM	to	8:30 AM		1080	27	70		15	43	44	3	27	854	713	12	88	3615	32	**6623**
8:30 AM	to	8:45 AM		1280	33	87		15	52	59	3	28	1019	892	15	104	4270	34	**7891**
8:45 AM	to	9:00 AM		1496	37	103		17	67	67	5	31	1176	1023	18	120	4813	37	**9010**
TOTAL BY PERIOD																			
7:00 AM	to	7:15 AM	0	160	4	9	0	0	4	12	0	10	65	90	4	23	493	7	**881**
7:15 AM	to	7:30 AM	0	134	4	9	0	1	5	4	0	2	140	126	2	10	628	7	**1072**
7:30 AM	to	7:45 AM	0	259	5	11	0	2	2	6	1	3	158	135	0	17	656	7	**1262**
7:45 AM	to	8:00 AM	0	164	6	22	0	4	13	5	1	3	180	155	2	17	668	6	**1246**
8:00 AM	to	8:15 AM	0	199	4	10	0	3	8	8	1	4	137	116	3	9	528	2	**1032**
8:15 AM	to	8:30 AM	0	164	4	9	0	5	11	9	0	5	174	91	1	12	642	3	**1130**
8:30 AM	to	8:45 AM	0	200	6	17	0	0	9	15	0	1	165	179	3	16	655	2	**1268**
8:45 AM	to	9:00 AM	0	216	4	16	0	2	15	8	2	3	157	131	3	16	543	3	**1119**
HOURLY TOTALS																			
7:00 AM	to	8:00 AM	0	717	19	51	0	7	24	27	2	18	543	506	8	67	2445	27	**4461**
7:15 AM	to	8:15 AM	0	756	19	52	0	10	28	23	3	12	615	532	7	53	2480	22	**4612**
7:30 AM	to	8:30 AM	0	786	19	52	0	14	34	28	3	15	649	497	6	55	2494	18	**4670**
7:45 AM	to	8:45 AM	0	727	20	58	0	12	41	37	2	13	656	541	9	54	2493	13	**4676**
8:00 AM	to	9:00 AM	0	779	18	52	0	10	43	40	3	13	633	517	10	53	2368	10	**4549**

PEAK HOUR SUMMARY

7:45 AM to 8:45 AM	NORTHBOUND NBU	NBL	NBT	NBR	SOUTHBOUND SBU	SBL	SBT	SBR	EASTBOUND EBU	EBL	EBT	EBR	WESTBOUND WBU	WBL	WBT	WBR	TOTAL
VOLUME	0	727	20	58	0	12	41	37	2	13	656	541	9	54	2493	13	**4676**
PEDESTRIAN																	**0**
BICYCLE																	**6**
PHF BY MOVEMENT	0.00	0.91	0.83	0.66	0.00	0.60	0.79	0.62	0.50	0.65	0.91	0.76	0.75	0.79	0.93	0.54	OVERALL
PHF BY APPROACH	0.90				0.90				0.88				0.93				0.92

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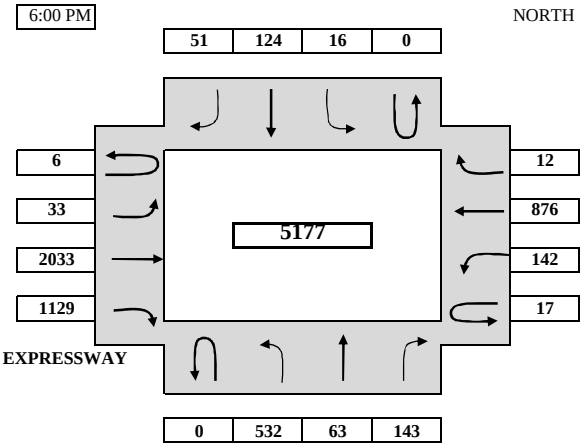
B.A.Y.M.E.T.R.I.C.S.

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT:	**MILPITAS TRAFFIC COUNTS**	**SURVEY DATE:**	**5/15/2013**	**DAY:**	**WEDNESDAY**
N-S APPROACH:	**McCANDLESS DRIVE**	**SURVEY TIME:**	**4:00 PM**	**TO**	**6:00 PM**
E-W APPROACH:	**MONTAGUE EXPRESSWAY**	**JURISDICTION:**	**MILPITAS**	**FILE:**	**3305057-9PM**

PEAK HOUR
5:00 PM to 6:00 PM

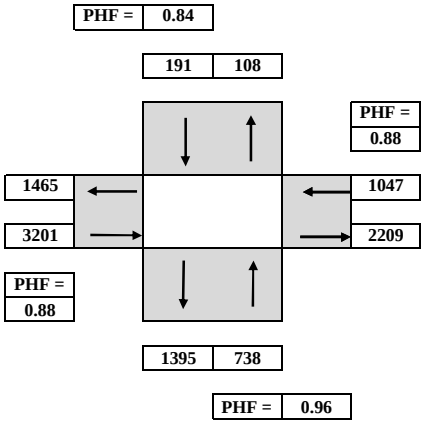
NORTH



MONTAGUE EXPRESSWAY

McCANDLESS DRIVE

ARRIVAL / DEPARTURE VOLUMES



TIME From		PERIOD To	NORTHBOUND U-TURN	NORTHBOUND LEFT	NORTHBOUND THRU	NORTHBOUND RIGHT	SOUTHBOUND U-TURN	SOUTHBOUND LEFT	SOUTHBOUND THRU	SOUTHBOUND RIGHT	EASTBOUND U-TURN	EASTBOUND LEFT	EASTBOUND THRU	EASTBOUND RIGHT	WESTBOUND U-TURN	WESTBOUND LEFT	WESTBOUND THRU	WESTBOUND RIGHT	TOTAL
SURVEY DATA																			
4:00 PM	to	4:15 PM		156	14	28		2	20	9	3	7	416	220	14	35	216	2	**1142**
4:15 PM	to	4:30 PM		267	25	50		9	44	15	7	14	900	460	19	57	407	3	**2277**
4:30 PM	to	4:45 PM		357	43	84		12	59	20	9	23	1375	723	23	84	630	5	**3447**
4:45 PM	to	5:00 PM		473	60	111		19	77	35	17	34	1895	998	34	113	859	8	**4733**
5:00 PM	to	5:15 PM		619	74	143		24	107	49	19	40	2278	1263	40	150	1110	12	**5928**
5:15 PM	to	5:30 PM		761	86	173		30	137	58	21	48	2843	1598	45	182	1322	13	**7317**
5:30 PM	to	5:45 PM		879	102	213		33	167	65	21	55	3407	1866	49	216	1524	16	**8613**
5:45 PM	to	6:00 PM		1005	123	254		35	201	86	23	67	3928	2127	51	255	1735	20	**9910**
TOTAL BY PERIOD																			
4:00 PM	to	4:15 PM	0	156	14	28	0	2	20	9	3	7	416	220	14	35	216	2	**1142**
4:15 PM	to	4:30 PM	0	111	11	22	0	7	24	6	4	7	484	240	5	22	191	1	**1135**
4:30 PM	to	4:45 PM	0	90	18	34	0	3	15	5	2	9	475	263	4	27	223	2	**1170**
4:45 PM	to	5:00 PM	0	116	17	27	0	7	18	15	8	11	520	275	11	29	229	3	**1286**
5:00 PM	to	5:15 PM	0	146	14	32	0	5	30	14	2	6	383	265	6	37	251	4	**1195**
5:15 PM	to	5:30 PM	0	142	12	30	0	6	30	9	2	8	565	335	5	32	212	1	**1389**
5:30 PM	to	5:45 PM	0	118	16	40	0	3	30	7	0	7	564	268	4	34	202	3	**1296**
5:45 PM	to	6:00 PM	0	126	21	41	0	2	34	21	2	12	521	261	2	39	211	4	**1297**
HOURLY TOTALS																			
4:00 PM	to	5:00 PM	0	473	60	111	0	19	77	35	17	34	1895	998	34	113	859	8	**4733**
4:15 PM	to	5:15 PM	0	463	60	115	0	22	87	40	16	33	1862	1043	26	115	894	10	**4786**
4:30 PM	to	5:30 PM	0	494	61	123	0	21	93	43	14	34	1943	1138	26	125	915	10	**5040**
4:45 PM	to	5:45 PM	0	522	59	129	0	21	108	45	12	32	2032	1143	26	132	894	11	**5166**
5:00 PM	to	6:00 PM	0	532	63	143	0	16	124	51	6	33	2033	1129	17	142	876	12	**5177**

PEAK HOUR SUMMARY

5:00 PM to 6:00 PM	NORTHBOUND NBU	NBL	NBT	NBR	SOUTHBOUND SBU	SBL	SBT	SBR	EASTBOUND EBU	EBL	EBT	EBR	WESTBOUND WBU	WBL	WBT	WBR	TOTAL
VOLUME	0	532	63	143	0	16	124	51	6	33	2033	1129	17	142	876	12	**5177**
PEDESTRIAN																	**1**
BICYCLE																	**6**
PHF BY MOVEMENT	0.00	0.91	0.75	0.87	0.00	0.67	0.91	0.61	0.75	0.69	0.90	0.84	0.71	0.91	0.87	0.75	OVERALL
PHF BY APPROACH	0.96				0.84				0.88				0.88				0.93

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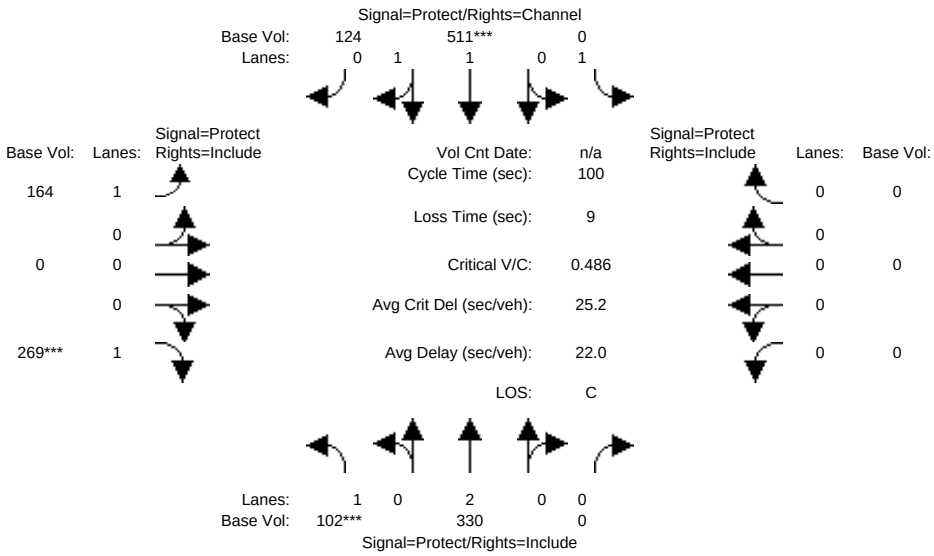
Appendix C – Level of Service Worksheets: Existing Conditions

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Existing AM

Intersection #1: South Main Street/Cedar Way/Project Driveway



Street Name:	S Main Street						Cedar Way/Project Driveway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	102	330	0	0	511	124	164	0	269	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	102	330	0	0	511	124	164	0	269	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.96	0.96	0.96	0.87	0.87	0.87	1.00	1.00	1.00
PHF Volume:	111	359	0	0	532	129	189	0	309	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	111	359	0	0	532	129	189	0	309	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	111	359	0	0	532	129	189	0	309	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	1.00	1.00	0.92	0.92	0.95	1.00	0.85	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	1.00	1.61	0.39	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1805	3610	0	1900	2818	684	1805	0	1610	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.06	0.10	0.00	0.00	0.19	0.19	0.10	0.00	0.19	0.00	0.00	0.00
Crit Moves:	****				****				****			
Green/Cycle:	0.13	0.51	0.00	0.00	0.39	0.39	0.40	0.00	0.40	0.00	0.00	0.00
Volume/Cap:	0.49	0.19	0.00	0.00	0.49	0.49	0.26	0.00	0.49	0.00	0.00	0.00
Uniform Del:	40.7	13.1	0.0	0.0	23.0	23.0	20.4	0.0	22.6	0.0	0.0	0.0
IncremntDel:	1.6	0.1	0.0	0.0	0.3	0.3	0.2	0.0	0.6	0.0	0.0	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Delay/Veh:	42.3	13.1	0.0	0.0	23.3	23.3	20.6	0.0	23.2	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.3	13.1	0.0	0.0	23.3	23.3	20.6	0.0	23.2	0.0	0.0	0.0
LOS by Move:	D	B	A	A	C	C	C	A	C	A	A	A
HCM2k95thQ:	126	120	0	0	309	308	154	0	279	0	0	0

Note: Queue reported is the distance per lane in feet.

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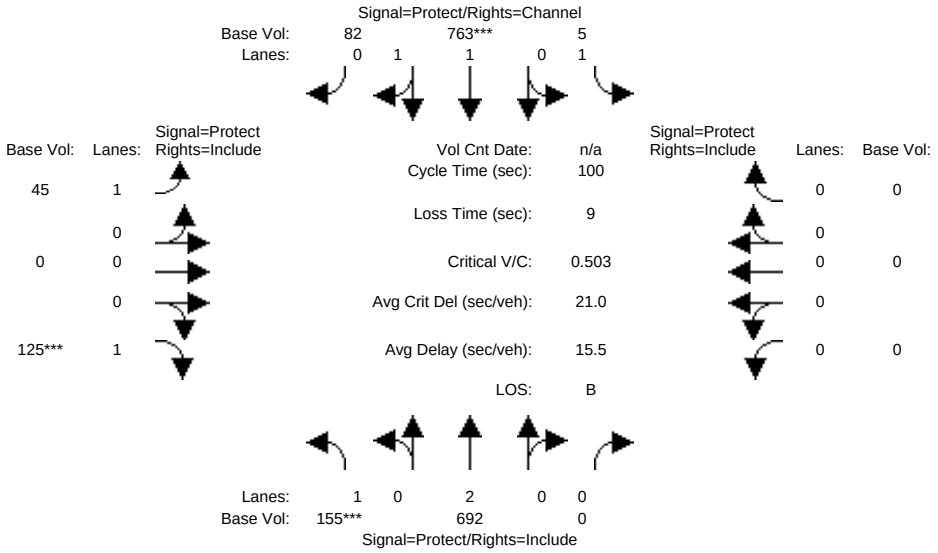
Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Existing PM

Intersection #1: South Main Street/Cedar Way/Project Driveway



Street Name:	S Main Street						Cedar Way/Project Driveway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	155	692	0	5	763	82	45	0	125	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	155	692	0	5	763	82	45	0	125	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.86	0.86	0.86	0.89	0.89	0.89	0.85	0.85	0.85	1.00	1.00	1.00
PHF Volume:	180	805	0	6	857	92	53	0	147	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	180	805	0	6	857	92	53	0	147	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	180	805	0	6	857	92	53	0	147	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	1.00	0.95	0.94	0.93	0.95	1.00	0.85	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	1.00	1.81	0.19	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1805	3610	0	1805	3209	345	1805	0	1612	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.10	0.22	0.00	0.00	0.27	0.27	0.03	0.00	0.09	0.00	0.00	0.00
Crit Moves:	****				****				****			
Green/Cycle:	0.20	0.72	0.00	0.01	0.53	0.53	0.18	0.00	0.18	0.00	0.00	0.00
Volume/Cap:	0.50	0.31	0.00	0.31	0.50	0.50	0.16	0.00	0.50	0.00	0.00	0.00
Uniform Del:	35.7	5.1	0.0	49.2	15.0	15.0	34.5	0.0	36.9	0.0	0.0	0.0
IncremntDel:	1.1	0.1	0.0	9.5	0.2	0.2	0.2	0.0	1.4	0.0	0.0	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Delay/Veh:	36.8	5.2	0.0	58.7	15.3	15.3	34.8	0.0	38.3	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	36.8	5.2	0.0	58.7	15.3	15.3	34.8	0.0	38.3	0.0	0.0	0.0
LOS by Move:	D	A	A	E	B	B	C	A	D	A	A	A
HCM2k95thQ:	190	182	0	22	365	364	59	0	182	0	0	0

Note: Queue reported is the distance per lane in feet.

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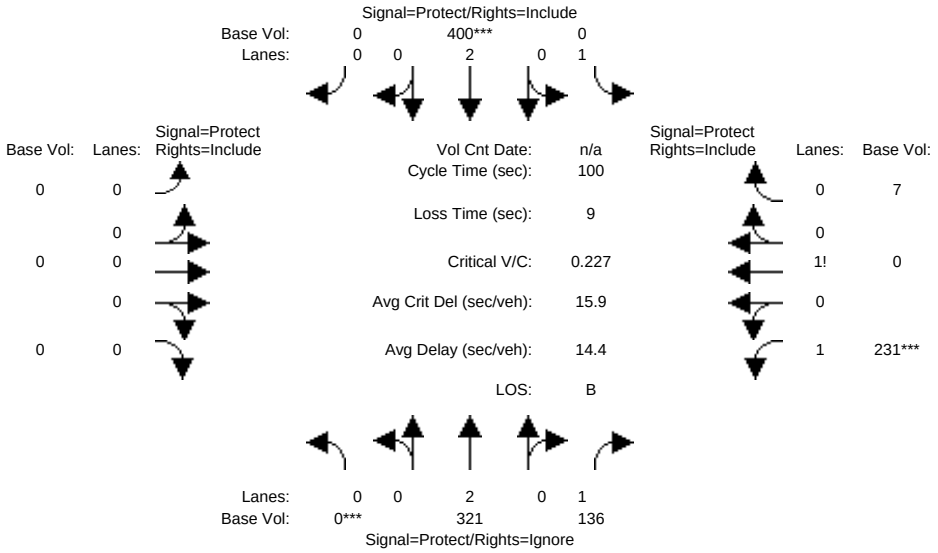
Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Existing AM

Intersection #2: South Main Street/South Abel Street



Street Name:	South Main Street						South Abel Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	321	136	0	400	0	0	0	0	231	0	7
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	321	136	0	400	0	0	0	0	231	0	7
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.87	0.87	0.00	0.89	0.89	0.89	1.00	1.00	1.00	0.80	0.80	0.80
PHF Volume:	0	369	0	0	449	0	0	0	0	289	0	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	369	0	0	449	0	0	0	0	289	0	9
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	369	0	0	449	0	0	0	0	289	0	9
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.95
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	0.00	0.00	0.00	1.94	0.00	0.06
Final Sat.:	0	3610	1900	1900	3610	0	0	0	0	3508	0	103
Capacity Analysis Module:												
Vol/Sat:	0.00	0.10	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.08	0.00	0.08
Crit Moves:	****				****					****		
Green/Cycle:	0.00	0.55	0.00	0.00	0.55	0.00	0.00	0.00	0.00	0.36	0.00	0.36
Volume/Cap:	0.00	0.19	0.00	0.00	0.23	0.00	0.00	0.00	0.00	0.23	0.00	0.23
Uniform Del:	0.0	11.4	0.0	0.0	11.7	0.0	0.0	0.0	0.0	22.2	0.0	22.2
IncremntDel:	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	11.4	0.0	0.0	11.7	0.0	0.0	0.0	0.0	22.3	0.0	22.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	11.4	0.0	0.0	11.7	0.0	0.0	0.0	0.0	22.3	0.0	22.3
LOS by Move:	A	B	A	A	B	A	A	A	A	C	A	C
HCM2k95thQ:	0	118	0	0	147	0	0	0	0	127	0	131

Note: Queue reported is the distance per lane in feet.

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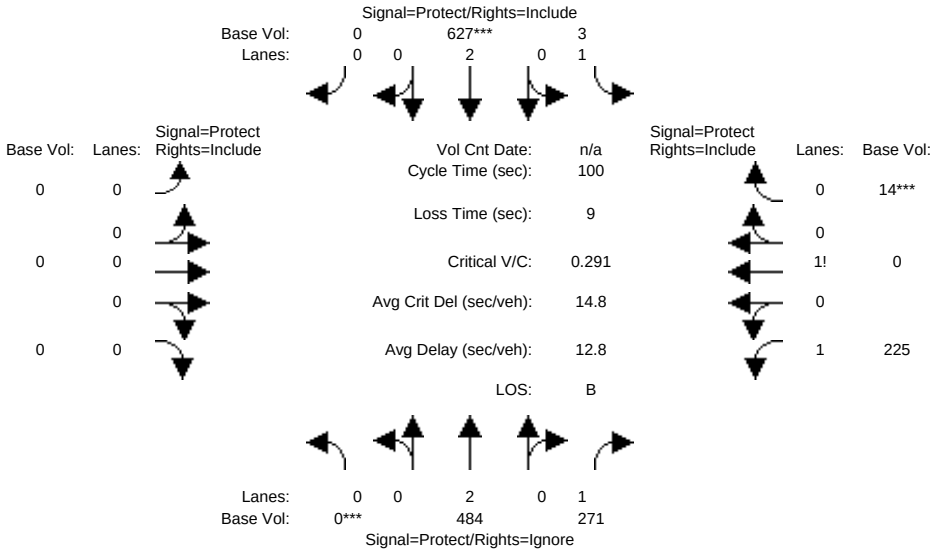
Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Existing PM

Intersection #2: South Main Street/South Abel Street



Street Name:	South Main Street						South Abel Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	484	271	3	627	0	0	0	0	225	0	14
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	484	271	3	627	0	0	0	0	225	0	14
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.00	0.97	0.97	0.97	1.00	1.00	1.00	0.82	0.82	0.82
PHF Volume:	0	520	0	3	646	0	0	0	0	274	0	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	520	0	3	646	0	0	0	0	274	0	17
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	520	0	3	646	0	0	0	0	274	0	17
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.95
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	0.00	0.00	0.00	1.89	0.00	0.11
Final Sat.:	0	3610	1900	1805	3610	0	0	0	0	3397	0	199
Capacity Analysis Module:												
Vol/Sat:	0.00	0.14	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.08	0.00	0.09
Crit Moves:	****				****							****
Green/Cycle:	0.00	0.61	0.00	0.01	0.62	0.00	0.00	0.00	0.00	0.29	0.00	0.29
Volume/Cap:	0.00	0.24	0.00	0.24	0.29	0.00	0.00	0.00	0.00	0.27	0.00	0.29
Uniform Del:	0.0	9.0	0.0	49.4	9.0	0.0	0.0	0.0	0.0	27.1	0.0	27.2
IncremntDel:	0.0	0.1	0.0	9.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	9.0	0.0	58.6	9.1	0.0	0.0	0.0	0.0	27.2	0.0	27.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	9.0	0.0	58.6	9.1	0.0	0.0	0.0	0.0	27.2	0.0	27.4
LOS by Move:	A	A	A	E	A	A	A	A	A	C	A	C
HCM2k95thQ:	0	151	0	14	190	0	0	0	0	138	0	148

Note: Queue reported is the distance per lane in feet.

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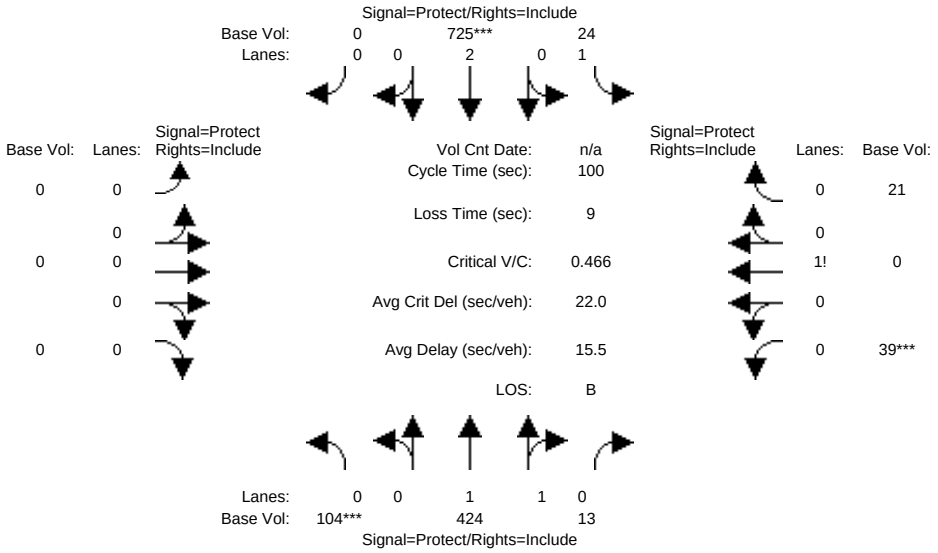
Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Existing AM

Intersection #3: South Main Street / Mihalakis Dr



Street Name:	South Main Street						Mihalakis Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	104	424	13	24	725	0	0	0	0	39	0	21
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	104	424	13	24	725	0	0	0	0	39	0	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.88	0.88	0.88	1.00	1.00	1.00	0.88	0.88	0.88
PHF Volume:	107	437	13	27	824	0	0	0	0	44	0	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	107	437	13	27	824	0	0	0	0	44	0	24
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	107	437	13	27	824	0	0	0	0	44	0	24
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.94	0.93	0.95	0.95	1.00	1.00	1.00	1.00	0.92	1.00	0.92
Lanes:	0.38	1.57	0.05	1.00	2.00	0.00	0.00	0.00	0.00	0.65	0.00	0.35
Final Sat.:	684	2790	86	1805	3610	0	0	0	0	1138	0	613
Capacity Analysis Module:												
Vol/Sat:	0.16	0.16	0.16	0.02	0.23	0.00	0.00	0.00	0.00	0.04	0.00	0.04
Crit Moves:	****				****					****		
Green/Cycle:	0.34	0.75	0.75	0.07	0.49	0.00	0.00	0.00	0.00	0.08	0.00	0.08
Volume/Cap:	0.47	0.21	0.21	0.21	0.47	0.00	0.00	0.00	0.00	0.47	0.00	0.47
Uniform Del:	26.1	3.6	3.6	43.7	16.9	0.0	0.0	0.0	0.0	43.7	0.0	43.7
IncremntDel:	0.3	0.0	0.0	0.8	0.2	0.0	0.0	0.0	0.0	2.3	0.0	2.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	26.4	3.6	3.6	44.4	17.0	0.0	0.0	0.0	0.0	46.0	0.0	46.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.4	3.6	3.6	44.4	17.0	0.0	0.0	0.0	0.0	46.0	0.0	46.0
LOS by Move:	C	A	A	D	B	A	A	A	A	D	A	D
HCM2k95thQ:	263	105	105	32	318	0	0	0	0	106	0	105

Note: Queue reported is the distance per lane in feet.

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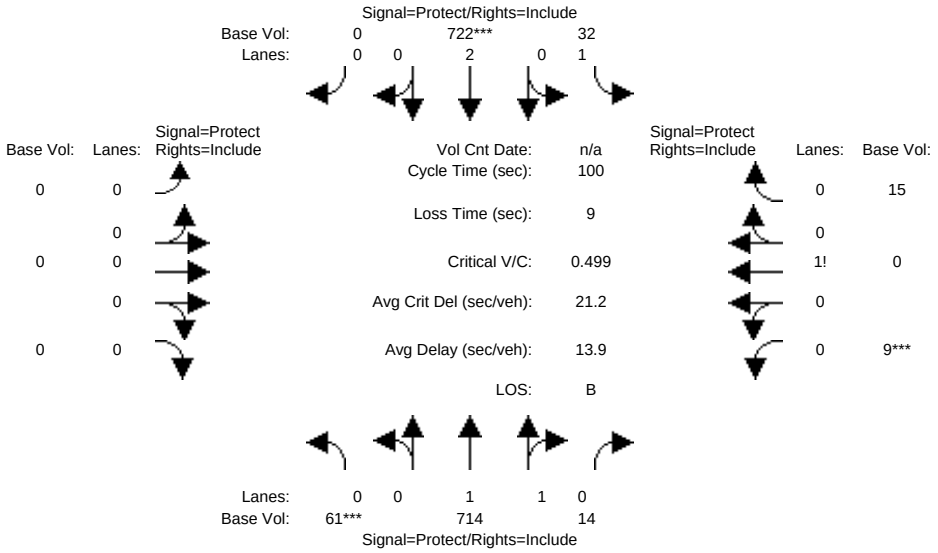
Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Existing PM

Intersection #3: South Main Street / Mihalakis Dr

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Street Name:        South Main Street                  Mihalakis Drive
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      61  714    14    32  722     0     0    0     0     9    0    15
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   61  714    14    32  722     0     0    0     0     9    0    15
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     0.97 0.97  0.97  0.96 0.96  0.96  1.00 1.00  1.00  0.75 0.75  0.75
PHF Volume:    63  736    14    33  752     0     0    0     0    12    0    20
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   63  736    14    33  752     0     0    0     0    12    0    20
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
FinalVolume:   63  736    14    33  752     0     0    0     0    12    0    20
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  0.94 0.94  0.94  0.95 0.95  1.00  1.00 1.00  1.00  0.90 1.00  0.89
Lanes:       0.15 1.81  0.04  1.00 2.00  0.00  0.00 0.00  0.00  0.37 0.00  0.63
Final Sat.:   277 3244    64  1805 3610     0     0    0     0   638    0  1063
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.23 0.23  0.23  0.02 0.21  0.00  0.00 0.00  0.00  0.02 0.00  0.02
Crit Moves:  ****                 ****                          ****
Green/Cycle: 0.45 0.81  0.81  0.07 0.42  0.00  0.00 0.00  0.00  0.04 0.00  0.04
Volume/Cap:  0.50 0.28  0.28  0.28 0.50  0.00  0.00 0.00  0.00  0.50 0.00  0.50
Uniform Del: 19.2  2.4   2.4  44.5 21.4   0.0   0.0  0.0   0.0  47.2  0.0  47.2
IncremntDel:  0.2  0.1   0.1   1.3  0.3   0.0   0.0  0.0   0.0   6.0  0.0   6.0
InitQueuDel:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
Delay Adj:   1.00 1.00  1.00  1.00 1.00  0.00  0.00 0.00  0.00  1.00 0.00  1.00
Delay/Veh:   19.5  2.5   2.5  45.8 21.7   0.0   0.0  0.0   0.0  53.2  0.0  53.2
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  19.5  2.5   2.5  45.8 21.7   0.0   0.0  0.0   0.0  53.2  0.0  53.2
LOS by Move:    B    A     A     D    C     A     A    A     A     D    A     D
HCM2k95thQ:   332  130   130    39  323     0     0    0     0    70    0    69
Note: Queue reported is the distance per lane in feet.
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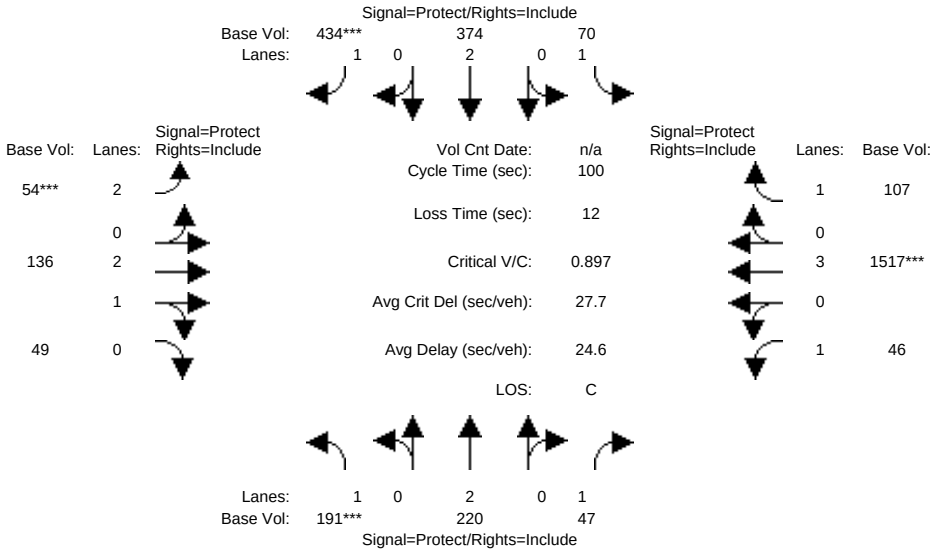
Level Of Service Computation Report
1994 HCM Operations (Base Volume Alternative)
Existing AM

Intersection #4: Great Mall and Abel



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	191	220	47	70	374	434	54	136	49	46	1517	107
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	191	220	47	70	374	434	54	136	49	46	1517	107
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.81	0.81	0.81	0.93	0.93	0.93	0.89	0.89	0.89	0.83	0.83	0.83
PHF Volume:	236	272	58	75	402	467	61	153	55	55	1828	129
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	236	272	58	75	402	467	61	153	55	55	1828	129
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.00	1.00	1.05	1.00	1.03	1.10	1.10	1.00	1.10	1.00
FinalVolume:	236	285	58	75	422	467	62	168	61	55	2010	129
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.96	0.96	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	2.00	2.21	0.79	1.00	3.00	1.00
Final Sat.:	1805	3800	1615	1805	3800	1615	3610	4023	1449	1805	5700	1615
Capacity Analysis Module:												
Vol/Sat:	0.13	0.08	0.04	0.04	0.11	0.29	0.02	0.04	0.04	0.03	0.35	0.08
Crit Moves:	****					****	****				****	
Green/Cycle:	0.15	0.30	0.30	0.17	0.32	0.32	0.02	0.24	0.24	0.17	0.39	0.39
Volume/Cap:	0.90	0.25	0.12	0.25	0.35	0.90	0.90	0.18	0.18	0.18	0.90	0.20
Uniform Del:	31.9	20.1	19.3	27.5	19.6	24.6	37.2	23.0	23.0	26.7	21.6	15.2
IncremntDel:	21.3	0.0	0.0	0.1	0.1	12.9	50.5	0.0	0.0	0.0	3.8	0.0
Delay Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Delay/Veh:	48.4	17.1	16.4	23.5	16.8	33.8	82.1	19.6	19.6	22.7	22.2	13.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	48.4	17.1	16.4	23.5	16.8	33.8	82.1	19.6	19.6	22.7	22.2	13.0
DesignQueue:	230	113	45	70	163	371	34	65	65	51	488	88

Note: Queue reported is the distance per lane in feet.

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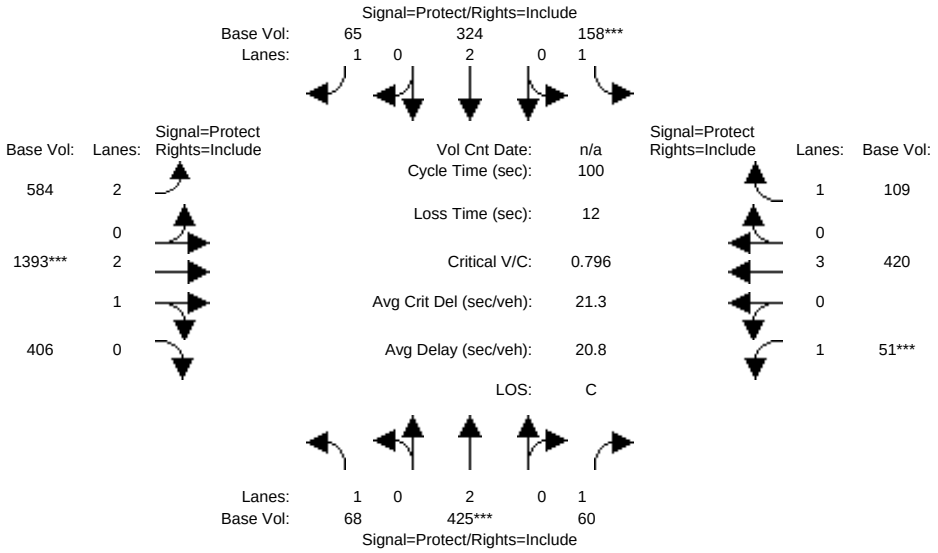
Level Of Service Computation Report
1994 HCM Operations (Base Volume Alternative)
Existing PM

Intersection #4: Great Mall and Abel



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	68	425	60	158	324	65	584	1393	406	51	420	109
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	68	425	60	158	324	65	584	1393	406	51	420	109
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.68	0.68	0.68	0.82	0.82	0.82	0.94	0.94	0.94	0.78	0.78	0.78
PHF Volume:	100	625	88	193	395	79	621	1482	432	65	538	140
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	100	625	88	193	395	79	621	1482	432	65	538	140
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.00	1.00	1.05	1.00	1.03	1.10	1.10	1.00	1.10	1.00
FinalVolume:	100	656	88	193	415	79	640	1630	475	65	592	140
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.96	0.96	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	2.00	2.32	0.68	1.00	3.00	1.00
Final Sat.:	1805	3800	1615	1805	3800	1615	3610	4237	1235	1805	5700	1615
Capacity Analysis Module:												
Vol/Sat:	0.06	0.17	0.05	0.11	0.11	0.05	0.18	0.38	0.38	0.04	0.10	0.09
Crit Moves:		****		****				****		****		
Green/Cycle:	0.12	0.22	0.22	0.13	0.23	0.23	0.33	0.48	0.48	0.05	0.20	0.20
Volume/Cap:	0.47	0.80	0.25	0.80	0.47	0.21	0.53	0.80	0.80	0.80	0.53	0.44
Uniform Del:	31.3	28.2	24.6	31.9	25.1	23.5	20.5	16.5	16.5	35.9	27.4	26.9
IncremntDel:	1.2	3.8	0.1	11.3	0.3	0.0	0.4	1.3	1.3	26.2	0.4	0.7
Delay Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Delay/Veh:	27.8	27.8	21.0	38.4	21.6	20.0	17.8	15.3	15.3	56.8	23.7	23.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.8	27.8	21.0	38.4	21.6	20.0	17.8	15.3	15.3	56.8	23.7	23.6
DesignQueue:	99	296	78	189	181	68	246	437	437	70	180	127

Note: Queue reported is the distance per lane in feet.

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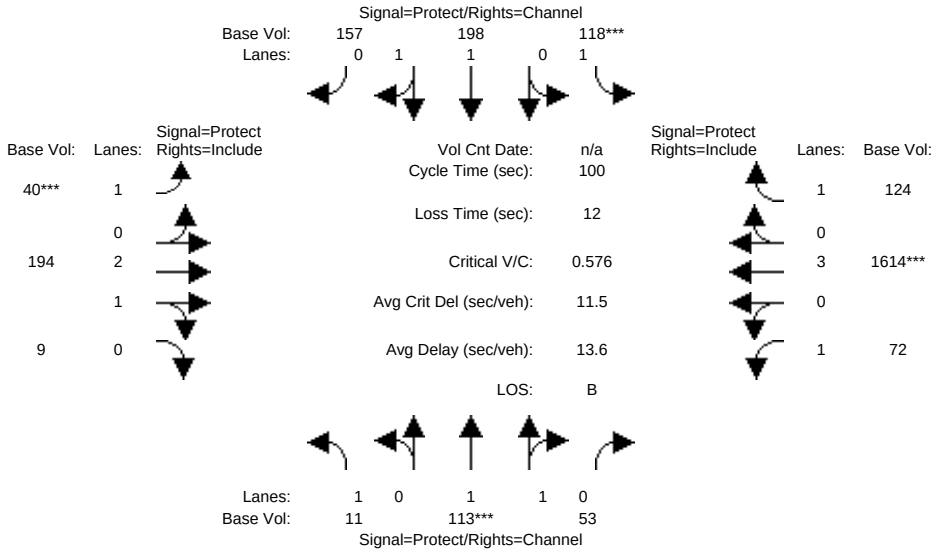
Level Of Service Computation Report
1994 HCM Operations (Base Volume Alternative)
Existing AM

Intersection #5: Great Mall & South Main



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	11	113	53	118	198	157	40	194	9	72	1614	124
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	11	113	53	118	198	157	40	194	9	72	1614	124
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.76	0.76	0.76	0.90	0.90	0.90	0.78	0.78	0.78	0.91	0.91	0.91
PHF Volume:	14	149	70	131	220	174	51	249	12	79	1774	136
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	14	149	70	131	220	174	51	249	12	79	1774	136
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.10	1.10	1.00	1.10	1.00
FinalVolume:	14	156	73	131	231	183	51	274	13	79	1951	136
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.93	0.93	0.95	0.99	0.99	0.95	1.00	0.85
Lanes:	1.00	1.36	0.64	1.00	1.12	0.88	1.00	2.87	0.13	1.00	3.00	1.00
Final Sat.:	1805	2457	1153	1805	1971	1563	1805	5393	250	1805	5700	1615
Capacity Analysis Module:												
Vol/Sat:	0.01	0.06	0.06	0.07	0.12	0.12	0.03	0.05	0.05	0.04	0.34	0.08
Crit Moves:		****		****			****				****	
Green/Cycle:	0.02	0.11	0.11	0.13	0.22	0.22	0.05	0.35	0.35	0.30	0.59	0.59
Volume/Cap:	0.53	0.58	0.58	0.58	0.53	0.53	0.58	0.15	0.15	0.15	0.58	0.14
Uniform Del:	37.2	32.1	32.1	31.3	26.1	26.1	35.3	17.2	17.2	19.6	9.5	6.8
IncremntDel:	12.5	1.5	1.5	2.6	0.6	0.6	6.2	0.0	0.0	0.0	0.2	0.0
Delay Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Delay/Veh:	44.1	28.8	28.8	29.2	22.7	22.7	36.3	14.6	14.6	16.6	8.3	5.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	44.1	28.8	28.8	29.2	22.7	22.7	36.3	14.6	14.6	16.6	8.3	5.8
DesignQueue:	16	115	115	129	183	183	54	70	70	62	316	62

Note: Queue reported is the distance per lane in feet.

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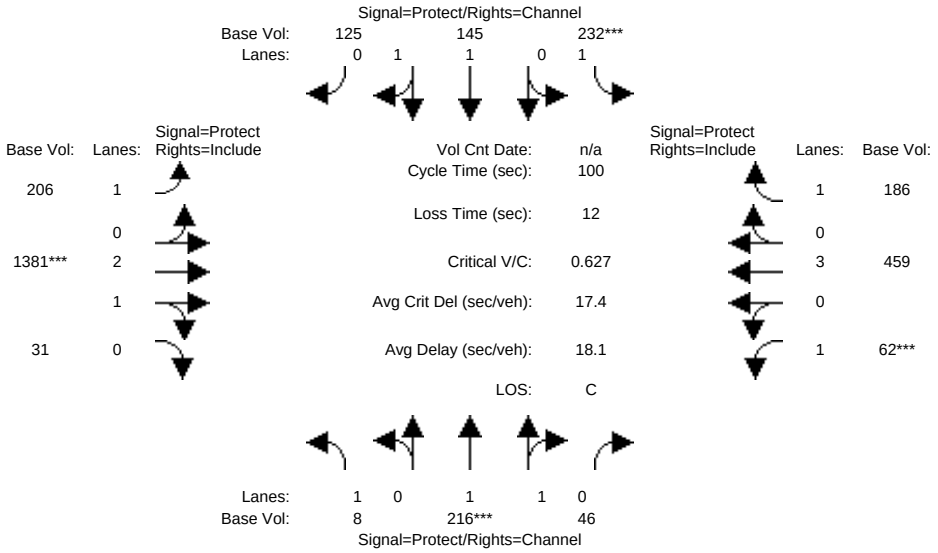
Level Of Service Computation Report
1994 HCM Operations (Base Volume Alternative)
Existing PM

Intersection #5: Great Mall & South Main



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	8	216	46	232	145	125	206	1381	31	62	459	186
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	216	46	232	145	125	206	1381	31	62	459	186
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.87	0.87	0.87	0.95	0.95	0.95	0.97	0.97	0.97
PHF Volume:	9	237	51	267	167	144	217	1454	33	64	473	192
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	9	237	51	267	167	144	217	1454	33	64	473	192
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.10	1.10	1.00	1.10	1.00
FinalVolume:	9	249	53	267	175	151	217	1599	36	64	521	192
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.97	0.97	0.95	0.93	0.93	0.95	1.00	1.00	0.95	1.00	0.84
Lanes:	1.00	1.65	0.35	1.00	1.07	0.93	1.00	2.93	0.07	1.00	3.00	1.00
Final Sat.:	1805	3039	647	1805	1898	1636	1805	5575	125	1805	5700	1596
Capacity Analysis Module:												
Vol/Sat:	0.00	0.08	0.08	0.15	0.09	0.09	0.12	0.29	0.29	0.04	0.09	0.12
Crit Moves:		****		****				****		****		
Green/Cycle:	0.02	0.13	0.13	0.24	0.35	0.35	0.26	0.46	0.46	0.06	0.26	0.26
Volume/Cap:	0.27	0.63	0.63	0.63	0.27	0.27	0.47	0.63	0.63	0.63	0.36	0.47
Uniform Del:	36.8	31.3	31.3	26.1	17.8	17.8	23.9	15.7	15.7	35.1	23.1	23.9
IncremntDel:	1.0	1.8	1.8	2.1	0.0	0.0	0.6	0.3	0.3	7.8	0.1	0.6
Delay Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Delay/Veh:	32.3	28.4	28.4	24.2	15.2	15.2	20.8	13.7	13.7	37.6	19.7	20.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.3	28.4	28.4	24.2	15.2	15.2	20.8	13.7	13.7	37.6	19.7	20.9
DesignQueue:	10	148	148	233	120	120	183	350	350	67	146	162

Note: Queue reported is the distance per lane in feet.

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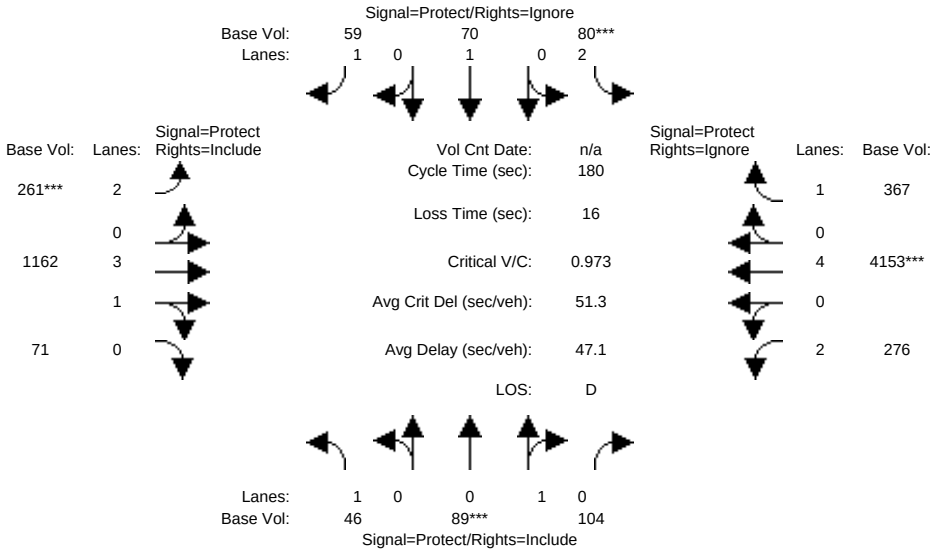
Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Existing AM

Intersection #6: O'Toole Ave/ McCarthy Blvd & Montague Expr



Street Name:O'Toole Avenue/McCarthy Boulevard Montague Expressway

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	46	89	104	80	70	59	261	1162	71	276	4153	367
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	46	89	104	80	70	59	261	1162	71	276	4153	367
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.65	0.65	0.65	0.89	0.89	0.00	0.88	0.88	0.88	0.96	0.96	0.00
PHF Volume:	71	137	160	90	79	0	297	1320	81	288	4326	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	71	137	160	90	79	0	297	1320	81	288	4326	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	71	137	160	90	79	0	297	1320	81	288	4326	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.97	1.00	1.00	0.97	0.91	0.91	0.97	0.91	1.00
Lanes:	1.00	0.46	0.54	2.00	1.00	1.00	2.00	3.77	0.23	2.00	4.00	1.00
Final Sat.:	1900	876	1024	3686	1900	1900	3686	6518	398	3686	6916	1900
Capacity Analysis Module:												
Vol/Sat:	0.04	0.16	0.16	0.02	0.04	0.00	0.08	0.20	0.20	0.08	0.63	0.00
Crit Moves:		****		****			****				****	
Green/Cycle:	0.09	0.16	0.16	0.03	0.10	0.00	0.08	0.52	0.52	0.20	0.64	0.00
Volume/Cap:	0.42	0.97	0.97	0.97	0.42	0.00	0.97	0.39	0.39	0.39	0.97	0.00
Uniform Del:	77.8	75.2	75.2	87.7	76.4	0.0	82.4	25.6	25.6	62.2	30.7	0.0
IncremntDel:	1.7	44.0	44.0	84.5	1.6	0.0	44.1	0.1	0.1	0.3	8.3	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	79.5	119	119.2	172.2	78.0	0.0	126.4	25.7	25.7	62.5	39.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	79.5	119	119.2	172.2	78.0	0.0	126.4	25.7	25.7	62.5	39.0	0.0
LOS by Move:	E	F	F	F	E	A	F	C	C	E	D	A
HCM2k95thQ:	160	690	690	182	173	0	426	438	438	268	2029	0

Note: Queue reported is the distance per lane in feet.

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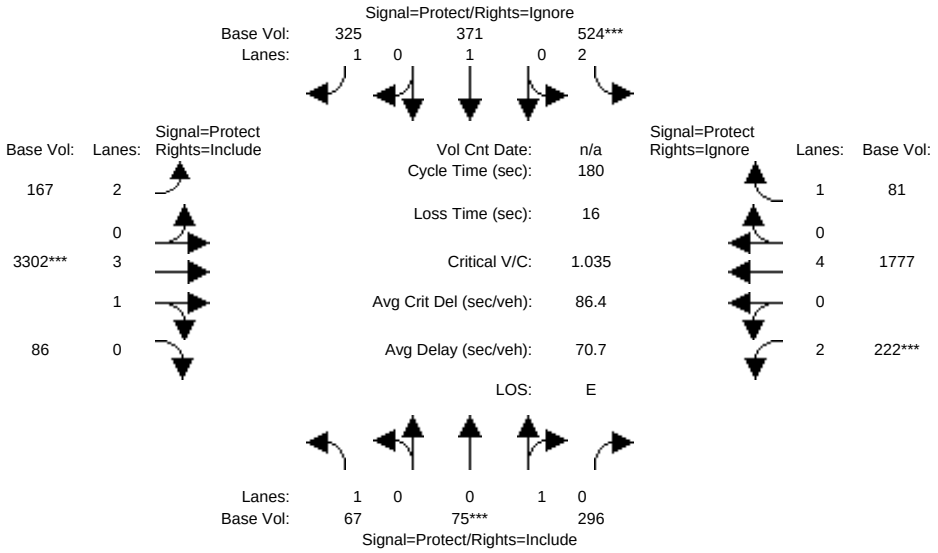
Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Existing PM

Intersection #6: O'Toole Ave/ McCarthy Blvd & Montague Expr



Street Name:	O'Toole Avenue/McCarthy Boulevard						Montague Expressway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	67	75	296	524	371	325	167	3302	86	222	1777	81
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	67	75	296	524	371	325	167	3302	86	222	1777	81
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.91	0.91	0.00	0.96	0.96	0.96	0.85	0.85	0.00
PHF Volume:	71	79	312	576	408	0	174	3440	90	261	2091	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	71	79	312	576	408	0	174	3440	90	261	2091	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	71	79	312	576	408	0	174	3440	90	261	2091	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.97	1.00	1.00	0.97	0.91	0.91	0.97	0.91	1.00
Lanes:	1.00	0.20	0.80	2.00	1.00	1.00	2.00	3.90	0.10	2.00	4.00	1.00
Final Sat.:	1900	384	1516	3686	1900	1900	3686	6740	176	3686	6916	1900
Capacity Analysis Module:												
Vol/Sat:	0.04	0.21	0.21	0.16	0.21	0.00	0.05	0.51	0.51	0.07	0.30	0.00
Crit Moves:		****		****				****		****		
Green/Cycle:	0.05	0.20	0.20	0.15	0.30	0.00	0.08	0.49	0.49	0.07	0.49	0.00
Volume/Cap:	0.72	1.03	1.03	1.03	0.72	0.00	0.62	1.03	1.03	1.03	0.62	0.00
Uniform Del:	84.1	72.1	72.1	76.4	56.5	0.0	80.7	45.6	45.6	83.8	34.1	0.0
IncremntDel:	22.7	55.6	55.6	47.5	4.5	0.0	4.3	25.4	25.4	66.0	0.4	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	106.8	128	127.8	123.9	61.0	0.0	85.0	71.0	71.0	149.9	34.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	106.8	128	127.8	123.9	61.0	0.0	85.0	71.0	71.0	149.9	34.5	0.0
LOS by Move:	F	F	F	F	E	A	F	E	E	F	C	A
HCM2k95thQ:	202	893	893	726	694	0	222	1876	1876	406	760	0

Note: Queue reported is the distance per lane in feet.

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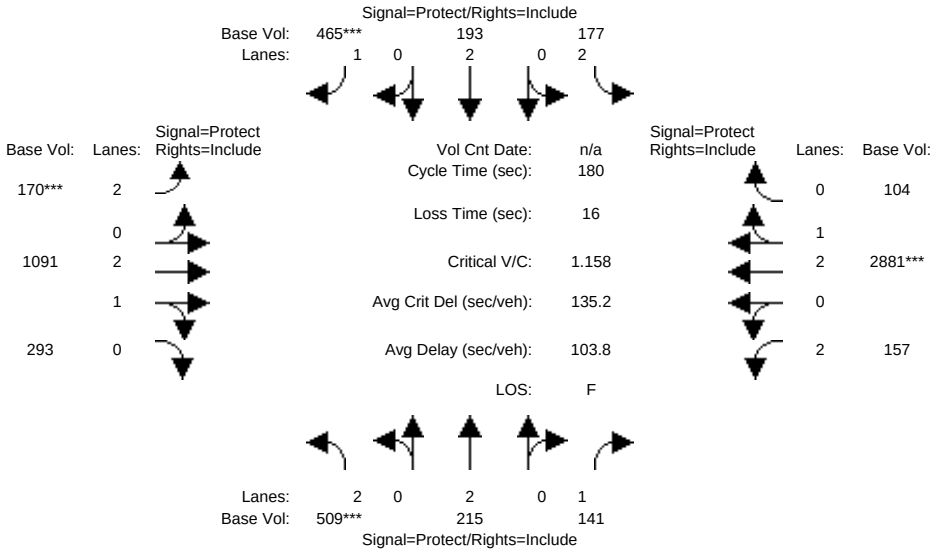
Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Existing AM

Intersection #7: S Main St/Oakland Road & Montague Expr



Street Name:	S Main Street/Oakland Road						Montague Expressway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	509	215	141	177	193	465	170	1091	293	157	2881	104
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	509	215	141	177	193	465	170	1091	293	157	2881	104
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.90	0.90	0.90	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	547	231	152	197	214	517	173	1113	299	160	2940	106
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	547	231	152	197	214	517	173	1113	299	160	2940	106
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	547	231	152	197	214	517	173	1113	299	160	2940	106
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.91	0.91	0.97	0.91	0.91
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.36	0.64	2.00	2.90	0.10
Final Sat.:	3686	3610	1900	3686	3610	1900	3686	4089	1098	3686	5006	181
Capacity Analysis Module:												
Vol/Sat:	0.15	0.06	0.08	0.05	0.06	0.27	0.05	0.27	0.27	0.04	0.59	0.59
Crit Moves:	****					****	****				****	
Green/Cycle:	0.13	0.22	0.22	0.15	0.23	0.23	0.04	0.47	0.47	0.08	0.51	0.51
Volume/Cap:	1.16	0.29	0.37	0.37	0.25	1.16	1.16	0.58	0.58	0.58	1.16	1.16
Uniform Del:	78.5	58.9	59.9	69.4	56.0	68.9	86.3	34.4	34.4	80.4	44.3	44.3
IncremntDel:	92.4	0.2	0.6	0.4	0.2	93.4	122.1	0.3	0.3	3.0	75.6	75.6
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	170.8	59.1	60.4	69.8	56.2	162.3	208.5	34.8	34.8	83.4	120	120.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	170.8	59.1	60.4	69.8	56.2	162.3	208.5	34.8	34.8	83.4	120	120.0
LOS by Move:	F	E	E	E	E	F	F	C	C	F	F	F
HCM2k95thQ:	764	214	267	189	187	1187	324	681	681	202	2424	2424

Note: Queue reported is the distance per lane in feet.

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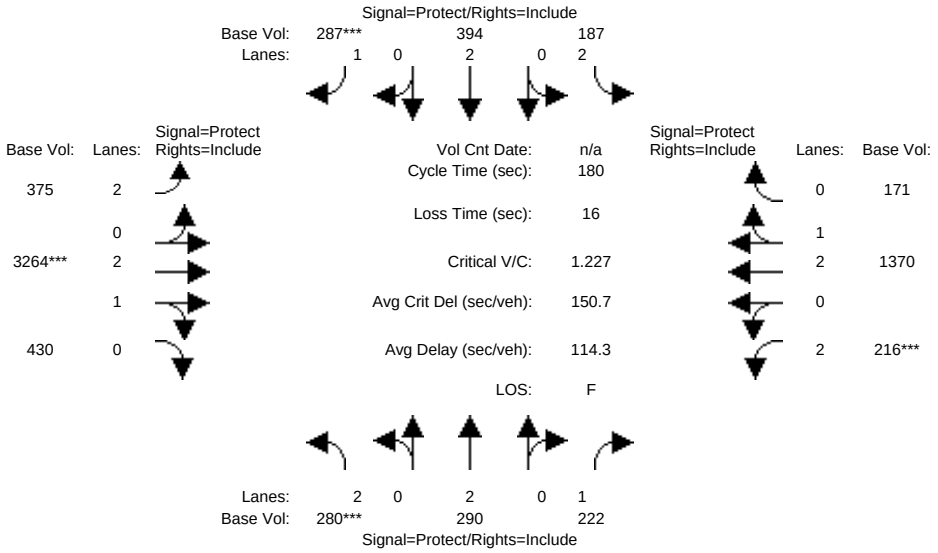
Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Existing PM

Intersection #7: S Main St/Oakland Road & Montague Expr



Street Name:	S Main Street/Oakland Road						Montague Expressway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	280	290	222	187	394	287	375	3264	430	216	1370	171
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	280	290	222	187	394	287	375	3264	430	216	1370	171
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.84	0.84	0.84	0.90	0.90	0.90	0.94	0.94	0.94
PHF Volume:	311	322	247	223	469	342	417	3627	478	230	1457	182
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	311	322	247	223	469	342	417	3627	478	230	1457	182
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	311	322	247	223	469	342	417	3627	478	230	1457	182
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.91	0.91	0.97	0.91	0.91
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.65	0.35	2.00	2.67	0.33
Final Sat.:	3686	3610	1900	3686	3610	1900	3686	4583	604	3686	4611	576
Capacity Analysis Module:												
Vol/Sat:	0.08	0.09	0.13	0.06	0.13	0.18	0.11	0.79	0.79	0.06	0.32	0.32
Crit Moves:	****					****		****		****		
Green/Cycle:	0.07	0.15	0.15	0.07	0.15	0.15	0.18	0.64	0.64	0.05	0.51	0.51
Volume/Cap:	1.23	0.61	0.88	0.88	0.89	1.23	0.62	1.23	1.23	1.23	0.62	0.62
Uniform Del:	83.8	71.9	75.3	83.1	75.3	76.8	67.7	32.0	32.0	85.4	31.3	31.3
IncremntDel:	131.8	2.0	26.4	28.5	16.4	129.6	1.7	105	104.9	140.0	0.4	0.4
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	215.7	73.9	101.7	111.6	91.8	206.5	69.4	137	136.9	225.4	31.7	31.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	215.7	73.9	101.7	111.6	91.8	206.5	69.4	137	136.9	225.4	31.7	31.7
LOS by Move:	F	E	F	F	F	F	E	F	F	F	C	C
HCM2k95thQ:	520	347	558	264	504	877	414	3443	3443	414	766	766

Note: Queue reported is the distance per lane in feet.

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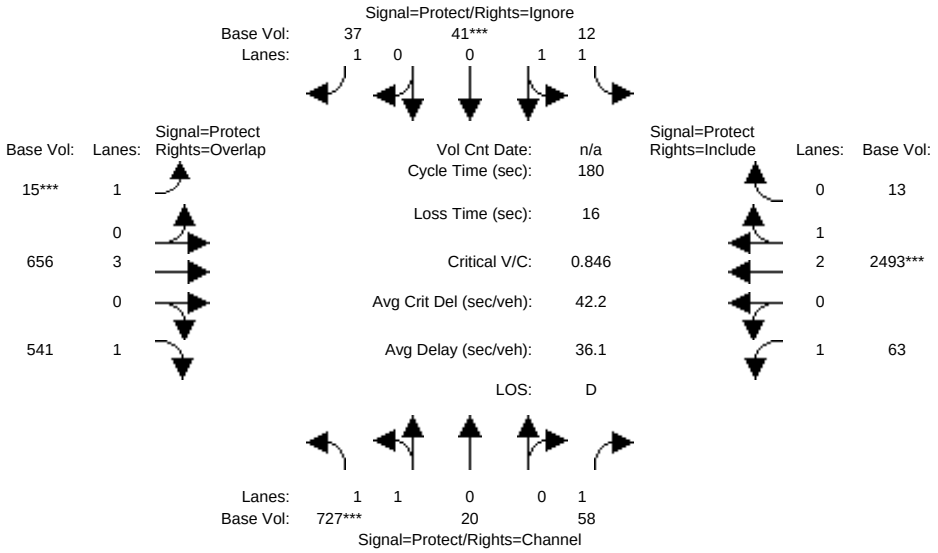
Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Existing AM

Intersection #8: McCandless DrZone Blvd & Montague Expr



Street Name:	Trade Zone Blvd/McCandless Dr						Montague Expressway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	727	20	58	12	41	37	15	656	541	63	2493	13
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	727	20	58	12	41	37	15	656	541	63	2493	13
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.00	0.88	0.88	0.88	0.93	0.93	0.93
PHF Volume:	808	22	64	13	46	0	17	745	615	68	2681	14
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	808	22	64	13	46	0	17	745	615	68	2681	14
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	808	22	64	13	46	0	17	745	615	68	2681	14
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Lanes:	1.95	0.05	1.00	1.00	1.00	1.00	1.00	3.00	1.00	1.00	2.98	0.02
Final Sat.:	3698	102	1900	1900	1900	1900	1900	5187	1900	1900	5160	27
Capacity Analysis Module:												
Vol/Sat:	0.22	0.22	0.03	0.01	0.02	0.00	0.01	0.14	0.32	0.04	0.52	0.52
Crit Moves:	****				****		****				****	
Green/Cycle:	0.26	0.28	0.28	0.01	0.03	0.00	0.01	0.50	0.76	0.12	0.61	0.61
Volume/Cap:	0.85	0.79	0.12	0.79	0.85	0.00	0.85	0.29	0.43	0.29	0.85	0.85
Uniform Del:	63.4	60.1	48.6	89.0	87.1	0.0	88.9	26.2	7.8	71.6	27.9	27.9
IncremntDel:	6.9	4.0	0.1	41.1	58.2	0.0	129.2	0.1	0.2	0.7	2.3	2.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	70.3	64.1	48.7	130.1	145	0.0	218.1	26.3	8.0	72.3	30.2	30.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	70.3	64.1	48.7	130.1	145	0.0	218.1	26.3	8.0	72.3	30.2	30.2
LOS by Move:	E	E	D	F	F	A	F	C	A	E	C	C
HCM2k95thQ:	784	744	103	72	166	0	87	314	425	128	1352	1352

Note: Queue reported is the distance per lane in feet.

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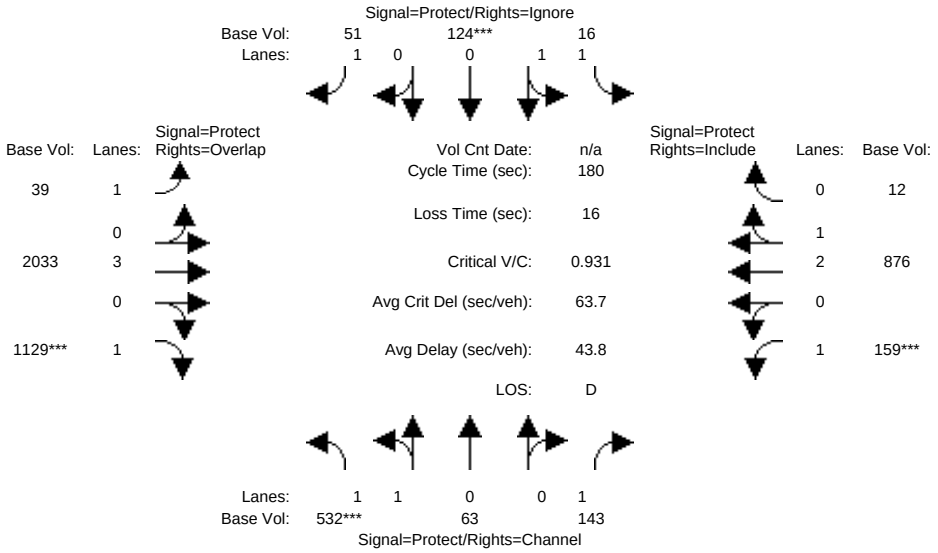
Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Existing PM

Intersection #8: McCandless DrZone Blvd & Montague Expr



Street Name:	Trade Zone Blvd/McCandless Dr						Montague Expressway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	532	63	143	16	124	51	39	2033	1129	159	876	12
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	532	63	143	16	124	51	39	2033	1129	159	876	12
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.84	0.84	0.00	0.88	0.88	0.88	0.88	0.88	0.88
PHF Volume:	554	66	149	19	148	0	44	2310	1283	181	995	14
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	554	66	149	19	148	0	44	2310	1283	181	995	14
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	554	66	149	19	148	0	44	2310	1283	181	995	14
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Lanes:	1.79	0.21	1.00	1.00	1.00	1.00	1.00	3.00	1.00	1.00	2.96	0.04
Final Sat.:	3398	402	1900	1900	1900	1900	1900	5187	1900	1900	5117	70
Capacity Analysis Module:												
Vol/Sat:	0.16	0.16	0.08	0.01	0.08	0.00	0.02	0.45	0.68	0.10	0.19	0.19
Crit Moves:	****				****				****	****		
Green/Cycle:	0.18	0.24	0.24	0.01	0.08	0.00	0.07	0.55	0.73	0.10	0.58	0.58
Volume/Cap:	0.93	0.67	0.32	0.67	0.93	0.00	0.33	0.81	0.93	0.93	0.33	0.33
Uniform Del:	73.2	61.5	55.9	88.2	82.0	0.0	79.7	32.8	20.9	80.2	19.5	19.5
IncremntDel:	19.8	1.9	0.4	6.9	47.6	0.0	1.5	1.8	11.4	45.2	0.1	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	92.9	63.4	56.3	95.1	130	0.0	81.2	34.7	32.3	125.4	19.5	19.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	92.9	63.4	56.3	95.1	130	0.0	81.2	34.7	32.3	125.4	19.5	19.5
LOS by Move:	F	E	E	F	F	A	F	C	C	F	B	B
HCM2k95thQ:	685	554	252	82	402	0	105	1196	1891	406	372	372

Note: Queue reported is the distance per lane in feet.

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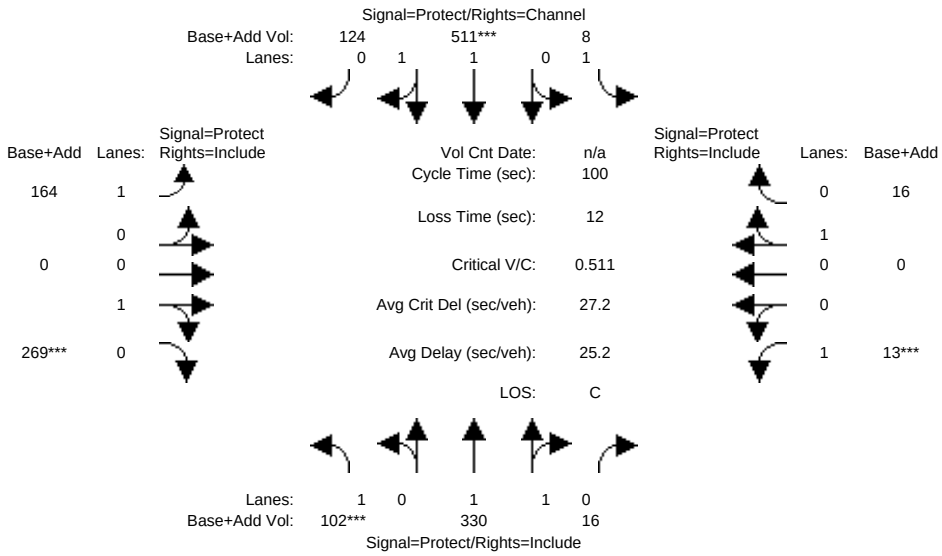
Appendix D – Level of Service Worksheets: Existing plus Project Conditions

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing Plus Project AM

Intersection #1: South Main Street/Cedar Way/Project Driveway



Street Name:	S Main Street						Cedar Way/Project Driveway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	102	330	0	0	511	124	164	0	269	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	102	330	0	0	511	124	164	0	269	0	0	0
Added Vol:	0	0	16	8	0	0	0	0	0	13	0	16
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	102	330	16	8	511	124	164	0	269	13	0	16
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.96	0.96	0.96	0.87	0.87	0.87	1.00	1.00	1.00
PHF Volume:	111	359	17	8	532	129	189	0	309	13	0	16
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	111	359	17	8	532	129	189	0	309	13	0	16
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	111	359	17	8	532	129	189	0	309	13	0	16
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.92	0.92	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.91	0.09	1.00	1.61	0.39	1.00	0.00	1.00	1.00	0.00	1.00
Final Sat.:	1805	3419	166	1805	2819	684	1805	0	1610	1805	0	1607
Capacity Analysis Module:												
Vol/Sat:	0.06	0.10	0.10	0.00	0.19	0.19	0.10	0.00	0.19	0.01	0.00	0.01
Crit Moves:	****				****				****	****		
Green/Cycle:	0.12	0.47	0.47	0.02	0.37	0.37	0.36	0.00	0.38	0.01	0.00	0.01
Volume/Cap:	0.51	0.22	0.22	0.22	0.51	0.51	0.29	0.00	0.51	0.51	0.00	0.71
Uniform Del:	41.2	15.7	15.7	48.2	24.5	24.5	23.1	0.0	24.1	49.0	0.0	49.1
IncremntDel:	2.0	0.1	0.1	3.0	0.3	0.3	0.3	0.0	0.7	16.3	0.0	68.9
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Delay/Veh:	43.3	15.8	15.8	51.2	24.8	24.8	23.4	0.0	24.8	65.3	0.0	118.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	43.3	15.8	15.8	51.2	24.8	24.8	23.4	0.0	24.8	65.3	0.0	118.0
LOS by Move:	D	B	B	D	C	C	C	A	C	E	A	F
HCM2k95thQ:	127	138	138	21	320	319	165	0	290	44	0	62

Note: Queue reported is the distance per lane in feet.

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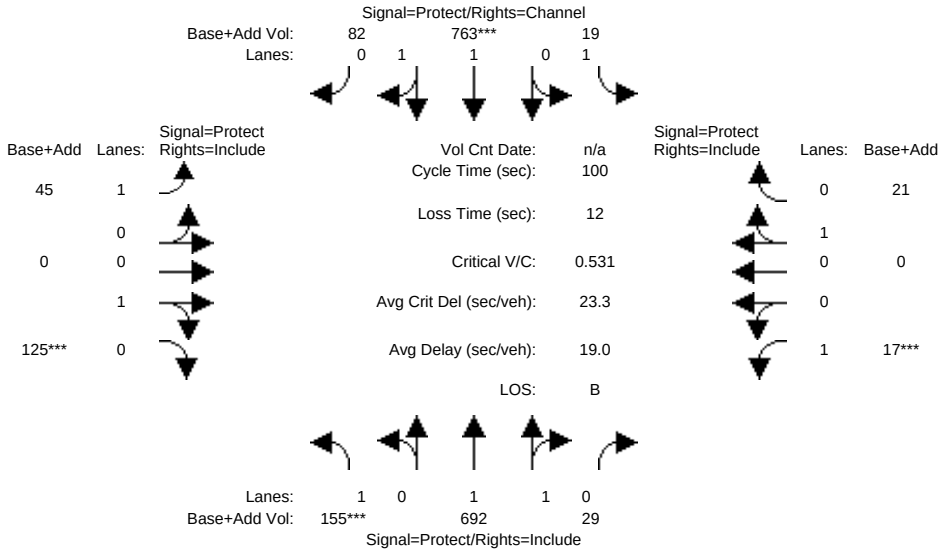
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing Plus Project PM

Intersection #1: South Main Street/Cedar Way/Project Driveway



Street Name:	S Main Street						Cedar Way/Project Driveway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	155	692	0	5	763	82	45	0	125	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	155	692	0	5	763	82	45	0	125	0	0	0
Added Vol:	0	0	29	14	0	0	0	0	0	17	0	21
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	155	692	29	19	763	82	45	0	125	17	0	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.86	0.86	0.86	0.89	0.89	0.89	0.85	0.85	0.85	1.00	1.00	1.00
PHF Volume:	180	805	34	21	857	92	53	0	147	17	0	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	180	805	34	21	857	92	53	0	147	17	0	21
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	180	805	34	21	857	92	53	0	147	17	0	21
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.94	0.93	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.92	0.08	1.00	1.81	0.19	1.00	0.00	1.00	1.00	0.00	1.00
Final Sat.:	1805	3444	144	1805	3210	345	1805	0	1612	1805	0	1610
Capacity Analysis Module:												
Vol/Sat:	0.10	0.23	0.23	0.01	0.27	0.27	0.03	0.00	0.09	0.01	0.00	0.01
Crit Moves:	****				****				****	****		
Green/Cycle:	0.19	0.66	0.66	0.03	0.50	0.50	0.13	0.00	0.17	0.02	0.00	0.02
Volume/Cap:	0.53	0.36	0.36	0.36	0.53	0.53	0.22	0.00	0.53	0.53	0.00	0.74
Uniform Del:	36.6	7.7	7.7	47.3	16.9	16.9	38.9	0.0	37.8	48.7	0.0	48.9
IncremntDel:	1.6	0.1	0.1	3.6	0.3	0.3	0.5	0.0	2.0	16.0	0.0	66.6
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Delay/Veh:	38.2	7.8	7.8	50.9	17.2	17.2	39.4	0.0	39.7	64.7	0.0	115.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.2	7.8	7.8	50.9	17.2	17.2	39.4	0.0	39.7	64.7	0.0	115.4
LOS by Move:	D	A	A	D	B	B	D	A	D	E	A	F
HCM2k95thQ:	193	229	228	45	386	385	66	0	188	52	0	73

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Note: Queue reported is the distance per lane in feet.

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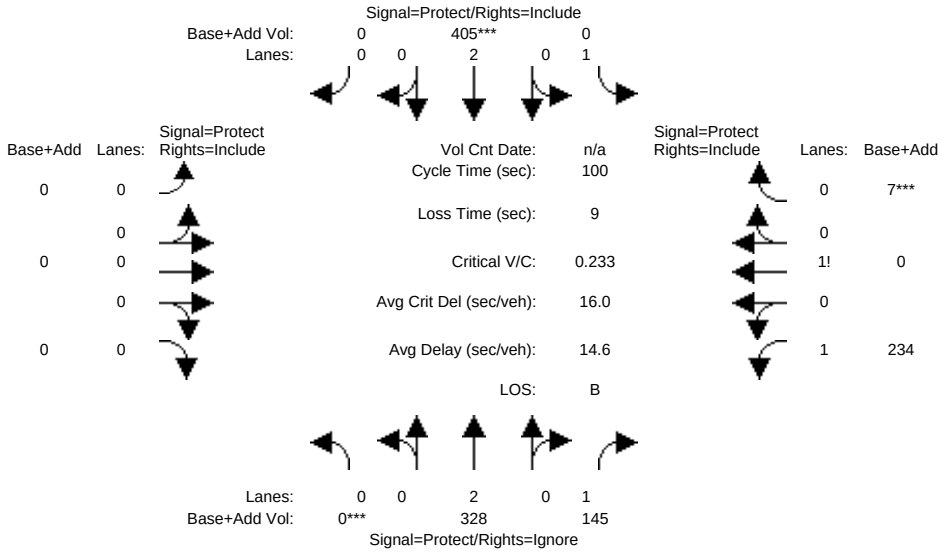
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing Plus Project AM

Intersection #2: South Main Street/South Abel Street



Street Name:	South Main Street						South Abel Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	321	136	0	400	0	0	0	0	231	0	7
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	321	136	0	400	0	0	0	0	231	0	7
Added Vol:	0	7	9	0	5	0	0	0	0	3	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	328	145	0	405	0	0	0	0	234	0	7
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.87	0.87	0.00	0.89	0.89	0.89	1.00	1.00	1.00	0.80	0.80	0.80
PHF Volume:	0	377	0	0	455	0	0	0	0	293	0	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	377	0	0	455	0	0	0	0	293	0	9
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	377	0	0	455	0	0	0	0	293	0	9
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.95
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	0.00	0.00	0.00	1.94	0.00	0.06
Final Sat.:	0	3610	1900	1900	3610	0	0	0	0	3509	0	102
Capacity Analysis Module:												
Vol/Sat:	0.00	0.10	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.08	0.00	0.09
Crit Moves:	****				****							****
Green/Cycle:	0.00	0.54	0.00	0.00	0.54	0.00	0.00	0.00	0.00	0.37	0.00	0.37
Volume/Cap:	0.00	0.19	0.00	0.00	0.23	0.00	0.00	0.00	0.00	0.23	0.00	0.23
Uniform Del:	0.0	11.7	0.0	0.0	12.0	0.0	0.0	0.0	0.0	21.7	0.0	21.8
IncremntDel:	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	11.8	0.0	0.0	12.1	0.0	0.0	0.0	0.0	21.8	0.0	21.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	11.8	0.0	0.0	12.1	0.0	0.0	0.0	0.0	21.8	0.0	21.9
LOS by Move:	A	B	A	A	B	A	A	A	A	C	A	C
HCM2k95thQ:	0	123	0	0	151	0	0	0	0	127	0	131

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Note: Queue reported is the distance per lane in feet.

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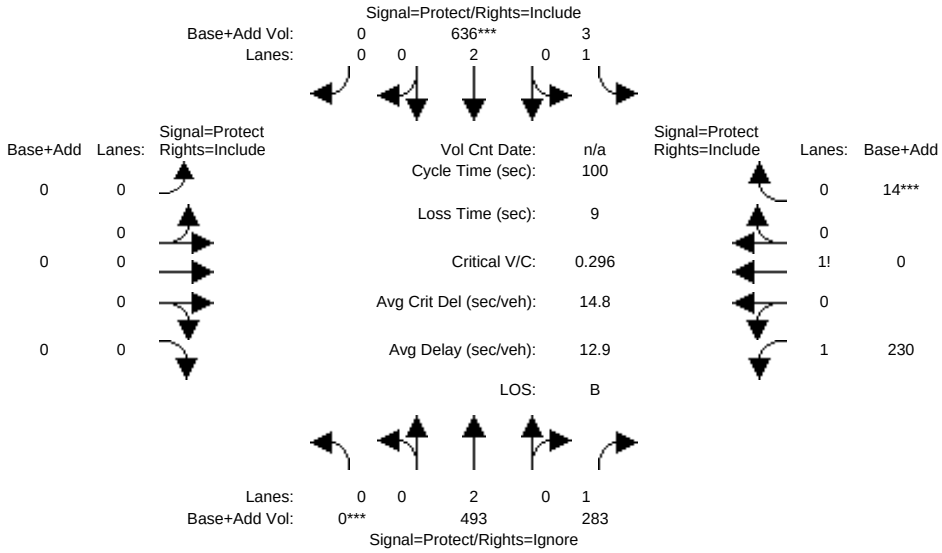
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing Plus Project PM

Intersection #2: South Main Street/South Abel Street



Street Name:	South Main Street						South Abel Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	484	271	3	627	0	0	0	0	225	0	14
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	484	271	3	627	0	0	0	0	225	0	14
Added Vol:	0	9	12	0	9	0	0	0	0	5	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	493	283	3	636	0	0	0	0	230	0	14
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.00	0.97	0.97	0.97	1.00	1.00	1.00	0.82	0.82	0.82
PHF Volume:	0	530	0	3	656	0	0	0	0	280	0	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	530	0	3	656	0	0	0	0	280	0	17
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	530	0	3	656	0	0	0	0	280	0	17
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.95
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	0.00	0.00	0.00	1.89	0.00	0.11
Final Sat.:	0	3610	1900	1805	3610	0	0	0	0	3401	0	195
Capacity Analysis Module:												
Vol/Sat:	0.00	0.15	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.08	0.00	0.09
Crit Moves:	****				****							****
Green/Cycle:	0.00	0.61	0.00	0.01	0.61	0.00	0.00	0.00	0.00	0.30	0.00	0.30
Volume/Cap:	0.00	0.24	0.00	0.24	0.30	0.00	0.00	0.00	0.00	0.28	0.00	0.30
Uniform Del:	0.0	9.0	0.0	49.4	9.1	0.0	0.0	0.0	0.0	27.0	0.0	27.2
IncremntDel:	0.0	0.1	0.0	9.6	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	9.1	0.0	59.0	9.2	0.0	0.0	0.0	0.0	27.2	0.0	27.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	9.1	0.0	59.0	9.2	0.0	0.0	0.0	0.0	27.2	0.0	27.3
LOS by Move:	A	A	A	E	A	A	A	A	A	C	A	C
HCM2k95thQ:	0	154	0	15	193	0	0	0	0	141	0	150

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Note: Queue reported is the distance per lane in feet.

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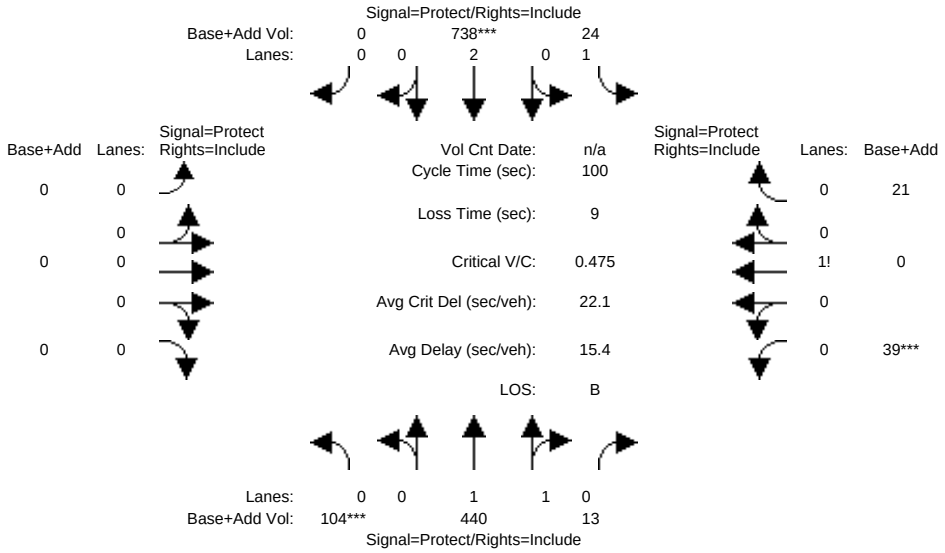
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing Plus Project AM

Intersection #3: South Main Street / Mihalakis Dr



Street Name:	South Main Street						Mihalakis Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	104	424	13	24	725	0	0	0	0	39	0	21
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	104	424	13	24	725	0	0	0	0	39	0	21
Added Vol:	0	16	0	0	13	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	104	440	13	24	738	0	0	0	0	39	0	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.88	0.88	0.88	1.00	1.00	1.00	0.88	0.88	0.88
PHF Volume:	107	454	13	27	839	0	0	0	0	44	0	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	107	454	13	27	839	0	0	0	0	44	0	24
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	107	454	13	27	839	0	0	0	0	44	0	24
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.94	0.94	0.95	0.95	1.00	1.00	1.00	1.00	0.92	1.00	0.92
Lanes:	0.37	1.58	0.05	1.00	2.00	0.00	0.00	0.00	0.00	0.65	0.00	0.35
Final Sat.:	666	2817	83	1805	3610	0	0	0	0	1138	0	613
Capacity Analysis Module:												
Vol/Sat:	0.16	0.16	0.16	0.02	0.23	0.00	0.00	0.00	0.00	0.04	0.00	0.04
Crit Moves:	****				****					****		
Green/Cycle:	0.34	0.76	0.76	0.07	0.49	0.00	0.00	0.00	0.00	0.08	0.00	0.08
Volume/Cap:	0.48	0.21	0.21	0.21	0.48	0.00	0.00	0.00	0.00	0.48	0.00	0.48
Uniform Del:	26.0	3.5	3.5	43.8	17.0	0.0	0.0	0.0	0.0	43.8	0.0	43.8
IncremntDel:	0.3	0.0	0.0	0.8	0.2	0.0	0.0	0.0	0.0	2.5	0.0	2.5
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	26.3	3.6	3.6	44.6	17.2	0.0	0.0	0.0	0.0	46.3	0.0	46.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.3	3.6	3.6	44.6	17.2	0.0	0.0	0.0	0.0	46.3	0.0	46.3
LOS by Move:	C	A	A	D	B	A	A	A	A	D	A	D
HCM2k95thQ:	284	109	109	32	325	0	0	0	0	107	0	106

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Note: Queue reported is the distance per lane in feet.

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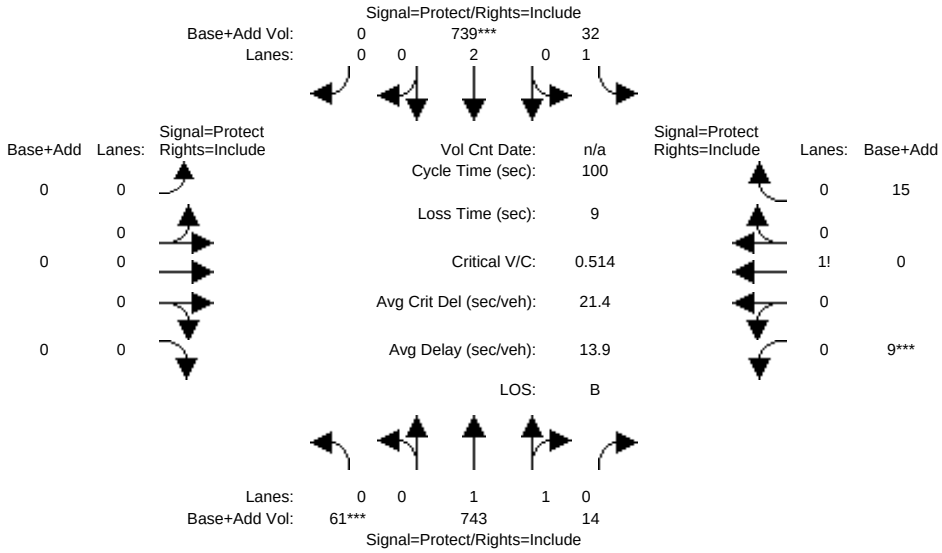
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing Plus Project PM

Intersection #3: South Main Street / Mihalakis Dr



Street Name:	South Main Street						Mihalakis Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	61	714	14	32	722	0	0	0	0	9	0	15
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	61	714	14	32	722	0	0	0	0	9	0	15
Added Vol:	0	29	0	0	17	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	61	743	14	32	739	0	0	0	0	9	0	15
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.96	0.96	0.96	1.00	1.00	1.00	0.75	0.75	0.75
PHF Volume:	63	766	14	33	770	0	0	0	0	12	0	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	63	766	14	33	770	0	0	0	0	12	0	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	63	766	14	33	770	0	0	0	0	12	0	20
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.94	0.94	0.95	0.95	1.00	1.00	1.00	1.00	0.90	1.00	0.89
Lanes:	0.15	1.82	0.03	1.00	2.00	0.00	0.00	0.00	0.00	0.37	0.00	0.63
Final Sat.:	267	3256	61	1805	3610	0	0	0	0	638	0	1063
Capacity Analysis Module:												
Vol/Sat:	0.24	0.24	0.24	0.02	0.21	0.00	0.00	0.00	0.00	0.02	0.00	0.02
Crit Moves:	****				****					****		
Green/Cycle:	0.46	0.81	0.81	0.06	0.42	0.00	0.00	0.00	0.00	0.04	0.00	0.04
Volume/Cap:	0.51	0.29	0.29	0.29	0.51	0.00	0.00	0.00	0.00	0.51	0.00	0.51
Uniform Del:	19.2	2.4	2.4	44.7	21.7	0.0	0.0	0.0	0.0	47.3	0.0	47.3
IncremntDel:	0.3	0.1	0.1	1.4	0.3	0.0	0.0	0.0	0.0	7.1	0.0	7.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	19.5	2.4	2.4	46.1	22.0	0.0	0.0	0.0	0.0	54.4	0.0	54.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	19.5	2.4	2.4	46.1	22.0	0.0	0.0	0.0	0.0	54.4	0.0	54.4
LOS by Move:	B	A	A	D	C	A	A	A	A	D	A	D
HCM2k95thQ:	361	139	138	39	333	0	0	0	0	71	0	71

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Note: Queue reported is the distance per lane in feet.

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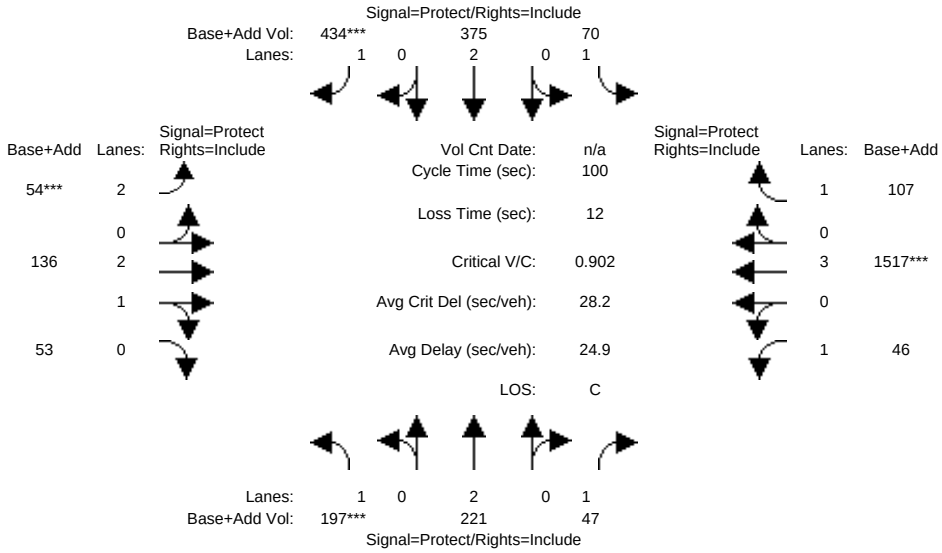
Level Of Service Computation Report
1994 HCM Operations (Future Volume Alternative)
Existing Plus Project AM

Intersection #4: Great Mall and Abel



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	191	220	47	70	374	434	54	136	49	46	1517	107
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	191	220	47	70	374	434	54	136	49	46	1517	107
Added Vol:	6	1	0	0	1	0	0	0	4	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	197	221	47	70	375	434	54	136	53	46	1517	107
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.81	0.81	0.81	0.93	0.93	0.93	0.89	0.89	0.89	0.83	0.83	0.83
PHF Volume:	243	273	58	75	403	467	61	153	60	55	1828	129
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	243	273	58	75	403	467	61	153	60	55	1828	129
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.00	1.00	1.05	1.00	1.03	1.10	1.10	1.00	1.10	1.00
FinalVolume:	243	286	58	75	423	467	62	168	66	55	2010	129
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.96	0.96	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	2.00	2.16	0.84	1.00	3.00	1.00
Final Sat.:	1805	3800	1615	1805	3800	1615	3610	3938	1534	1805	5700	1615
Capacity Analysis Module:												
Vol/Sat:	0.13	0.08	0.04	0.04	0.11	0.29	0.02	0.04	0.04	0.03	0.35	0.08
Crit Moves:	****					****	****				****	
Green/Cycle:	0.15	0.30	0.30	0.17	0.32	0.32	0.02	0.24	0.24	0.17	0.39	0.39
Volume/Cap:	0.90	0.25	0.12	0.25	0.35	0.90	0.90	0.18	0.18	0.18	0.90	0.20
Uniform Del:	31.8	20.0	19.2	27.5	19.8	24.7	37.2	23.0	23.0	26.9	21.8	15.3
IncremntDel:	21.6	0.0	0.0	0.1	0.1	13.5	51.9	0.0	0.0	0.0	4.1	0.0
Delay Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Delay/Veh:	48.6	17.0	16.3	23.5	16.9	34.4	83.5	19.6	19.6	22.9	22.6	13.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	48.6	17.0	16.3	23.5	16.9	34.4	83.5	19.6	19.6	22.9	22.6	13.0
DesignQueue:	236	113	45	70	164	372	34	66	66	51	490	88

Note: Queue reported is the distance per lane in feet.

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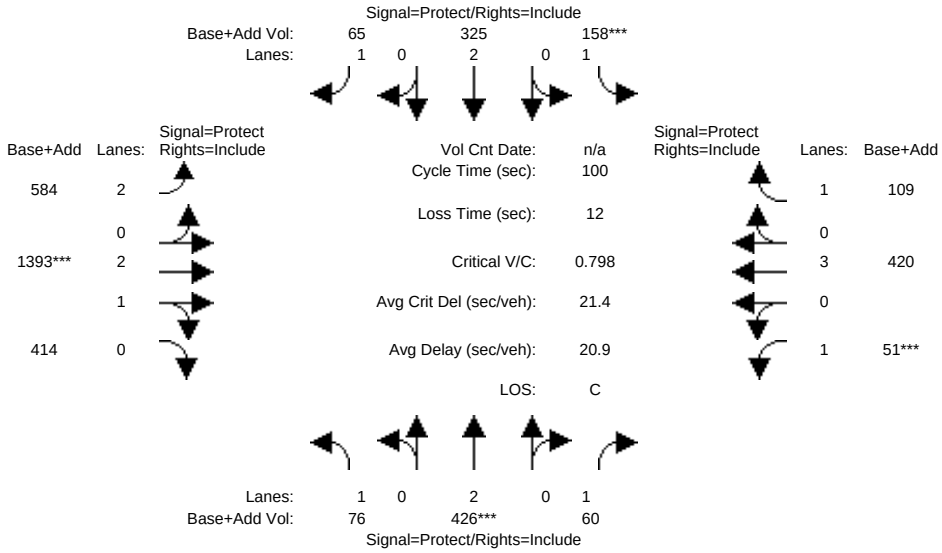
Level Of Service Computation Report
1994 HCM Operations (Future Volume Alternative)
Existing Plus Project PM

Intersection #4: Great Mall and Abel



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	68	425	60	158	324	65	584	1393	406	51	420	109
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	68	425	60	158	324	65	584	1393	406	51	420	109
Added Vol:	8	1	0	0	1	0	0	0	8	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	76	426	60	158	325	65	584	1393	414	51	420	109
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.68	0.68	0.68	0.82	0.82	0.82	0.94	0.94	0.94	0.78	0.78	0.78
PHF Volume:	112	626	88	193	396	79	621	1482	440	65	538	140
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	112	626	88	193	396	79	621	1482	440	65	538	140
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.00	1.00	1.05	1.00	1.03	1.10	1.10	1.00	1.10	1.00
FinalVolume:	112	658	88	193	416	79	640	1630	484	65	592	140
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.96	0.96	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	2.00	2.31	0.69	1.00	3.00	1.00
Final Sat.:	1805	3800	1615	1805	3800	1615	3610	4218	1254	1805	5700	1615
Capacity Analysis Module:												
Vol/Sat:	0.06	0.17	0.05	0.11	0.11	0.05	0.18	0.39	0.39	0.04	0.10	0.09
Crit Moves:		****		****				****		****		
Green/Cycle:	0.13	0.22	0.22	0.13	0.22	0.22	0.33	0.48	0.48	0.05	0.20	0.20
Volume/Cap:	0.49	0.80	0.25	0.80	0.49	0.22	0.53	0.80	0.80	0.80	0.53	0.44
Uniform Del:	30.9	28.2	24.7	31.9	25.7	24.1	20.5	16.5	16.5	35.9	27.4	26.9
IncremntDel:	1.3	3.9	0.1	11.5	0.4	0.1	0.4	1.3	1.3	26.7	0.4	0.7
Delay Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Delay/Veh:	27.6	27.9	21.0	38.6	22.2	20.5	17.8	15.3	15.3	57.2	23.7	23.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.6	27.9	21.0	38.6	22.2	20.5	17.8	15.3	15.3	57.2	23.7	23.5
DesignQueue:	110	297	78	190	184	69	246	438	438	70	180	127

Note: Queue reported is the distance per lane in feet.

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Level Of Service Computation Report
1994 HCM Operations (Future Volume Alternative)
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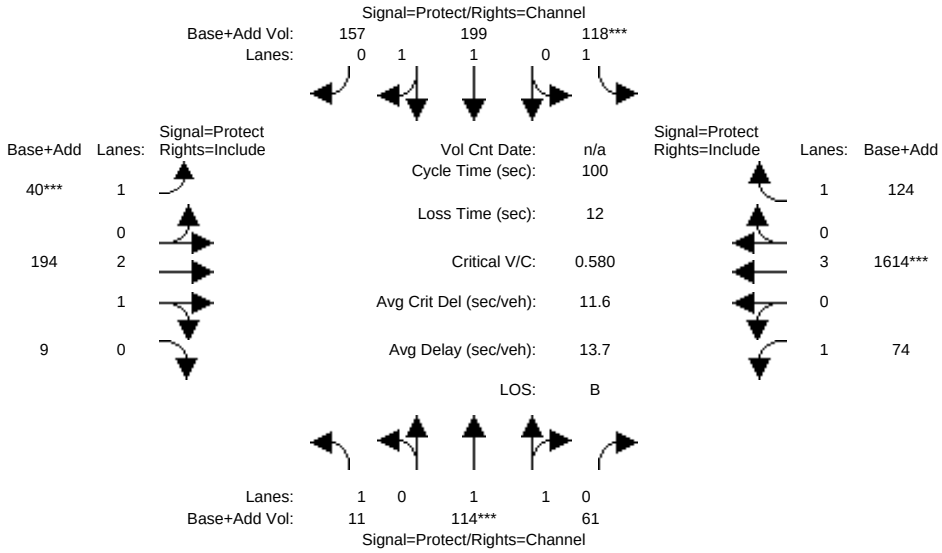
Intersection #5: Great Mall & South Main



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	11	113	53	118	198	157	40	194	9	72	1614	124
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	11	113	53	118	198	157	40	194	9	72	1614	124
Added Vol:	0	1	8	0	1	0	0	0	0	2	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	11	114	61	118	199	157	40	194	9	74	1614	124
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.76	0.76	0.76	0.90	0.90	0.90	0.78	0.78	0.78	0.91	0.91	0.91
PHF Volume:	14	150	80	131	221	174	51	249	12	81	1774	136
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	14	150	80	131	221	174	51	249	12	81	1774	136
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.10	1.10	1.00	1.10	1.00
FinalVolume:	14	158	84	131	232	183	51	274	13	81	1951	136
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.95	0.95	0.93	0.93	0.95	0.99	0.99	0.95	1.00	0.85
Lanes:	1.00	1.30	0.70	1.00	1.12	0.88	1.00	2.87	0.13	1.00	3.00	1.00
Final Sat.:	1805	2352	1258	1805	1975	1559	1805	5393	250	1805	5700	1615
Capacity Analysis Module:												
Vol/Sat:	0.01	0.07	0.07	0.07	0.12	0.12	0.03	0.05	0.05	0.05	0.34	0.08
Crit Moves:		****		****			****				****	
Green/Cycle:	0.02	0.12	0.12	0.13	0.23	0.23	0.05	0.34	0.34	0.30	0.59	0.59
Volume/Cap:	0.52	0.58	0.58	0.58	0.52	0.52	0.58	0.15	0.15	0.15	0.58	0.14
Uniform Del:	37.1	31.9	31.9	31.4	25.8	25.8	35.4	17.5	17.5	19.5	9.7	7.0
IncremntDel:	11.7	1.5	1.5	2.7	0.5	0.5	6.4	0.0	0.0	0.0	0.2	0.0
Delay Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Delay/Veh:	43.3	28.6	28.6	29.3	22.5	22.5	36.5	14.9	14.9	16.6	8.4	5.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	43.3	28.6	28.6	29.3	22.5	22.5	36.5	14.9	14.9	16.6	8.4	5.9
DesignQueue:	16	120	120	129	183	183	54	71	71	64	319	63

Note: Queue reported is the distance per lane in feet.

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Level Of Service Computation Report
1994 HCM Operations (Future Volume Alternative)
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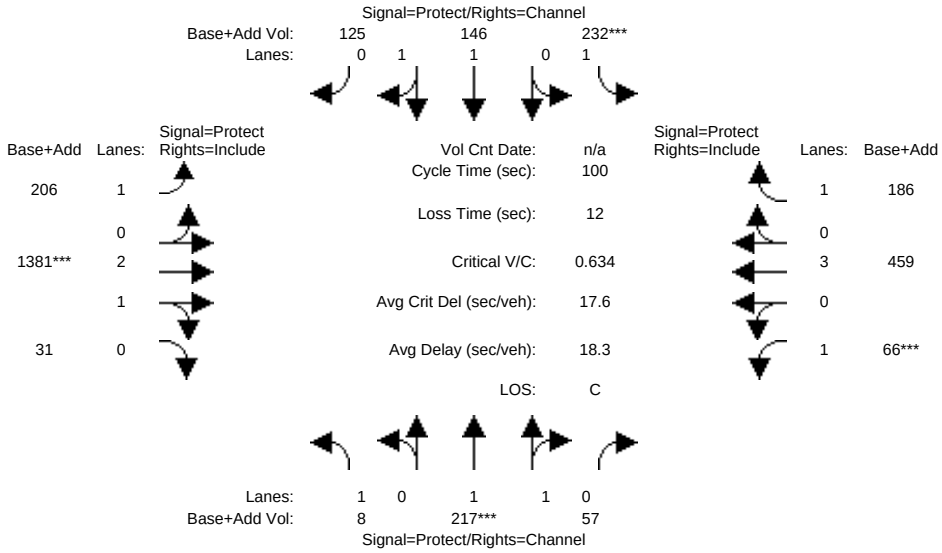
Intersection #5: Great Mall & South Main



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	8	216	46	232	145	125	206	1381	31	62	459	186
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	216	46	232	145	125	206	1381	31	62	459	186
Added Vol:	0	1	11	0	1	0	0	0	0	4	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	8	217	57	232	146	125	206	1381	31	66	459	186
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.87	0.87	0.87	0.95	0.95	0.95	0.97	0.97	0.97
PHF Volume:	9	238	63	267	168	144	217	1454	33	68	473	192
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	9	238	63	267	168	144	217	1454	33	68	473	192
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.10	1.10	1.00	1.10	1.00
FinalVolume:	9	250	66	267	176	151	217	1599	36	68	521	192
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.97	0.97	0.95	0.93	0.93	0.95	1.00	1.00	0.95	1.00	0.84
Lanes:	1.00	1.58	0.42	1.00	1.08	0.92	1.00	2.93	0.07	1.00	3.00	1.00
Final Sat.:	1805	2919	767	1805	1904	1630	1805	5575	125	1805	5700	1596
Capacity Analysis Module:												
Vol/Sat:	0.00	0.09	0.09	0.15	0.09	0.09	0.12	0.29	0.29	0.04	0.09	0.12
Crit Moves:		****		****				****		****		
Green/Cycle:	0.02	0.14	0.14	0.23	0.35	0.35	0.26	0.45	0.45	0.06	0.26	0.26
Volume/Cap:	0.26	0.63	0.63	0.63	0.26	0.26	0.47	0.63	0.63	0.63	0.36	0.47
Uniform Del:	36.8	31.1	31.1	26.2	17.7	17.7	23.9	16.0	16.0	34.9	23.2	23.9
IncremntDel:	1.0	1.9	1.9	2.2	0.0	0.0	0.6	0.4	0.4	7.8	0.1	0.7
Delay Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Delay/Veh:	32.3	28.3	28.3	24.5	15.1	15.1	20.9	14.0	14.0	37.5	19.7	21.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.3	28.3	28.3	24.5	15.1	15.1	20.9	14.0	14.0	37.5	19.7	21.0
DesignQueue:	10	155	155	234	120	120	184	353	353	72	146	162

Note: Queue reported is the distance per lane in feet.

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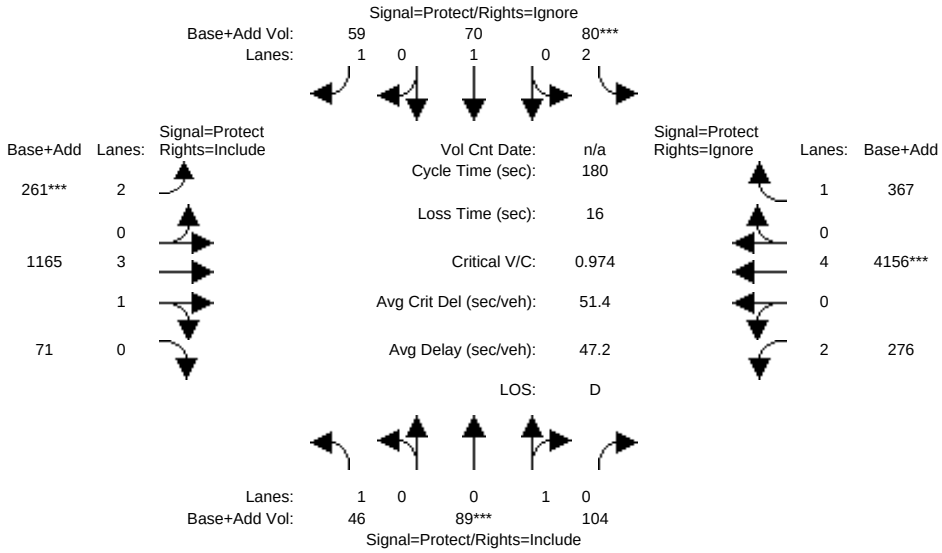
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing Plus Project AM

Intersection #6: O'Toole Ave/ McCarthy Blvd & Montague Expr

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Street Name:O'Toole Avenue/McCarthy Boulevard        Montague Expressway
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      46   89   104    80   70    59   261 1162    71   276 4153   367
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   46   89   104    80   70    59   261 1162    71   276 4153   367
Added Vol:      0    0     0     0    0     0     0    3     0     0    3     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   46   89   104    80   70    59   261 1165    71   276 4156   367
User Adj:    1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  0.00
PHF Adj:     0.65 0.65  0.65  0.89 0.89  0.00  0.88 0.88  0.88  0.96 0.96  0.00
PHF Volume:    71  137   160    90   79     0   297 1324    81   288 4329     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   71  137   160    90   79     0   297 1324    81   288 4329     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  0.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  0.00
FinalVolume:   71  137   160    90   79     0   297 1324    81   288 4329     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 1.00  1.00  0.97 1.00  1.00  0.97 0.91  0.91  0.97 0.91  1.00
Lanes:       1.00 0.46  0.54  2.00 1.00  1.00  2.00 3.77  0.23  2.00 4.00  1.00
Final Sat.:  1900  876  1024  3686 1900  1900  3686 6519   397  3686 6916  1900
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.16  0.16  0.02 0.04  0.00  0.08 0.20  0.20  0.08 0.63  0.00
Crit Moves:       ****        ****              ****                   ****
Green/Cycle: 0.09 0.16  0.16  0.03 0.10  0.00  0.08 0.52  0.52  0.20 0.64  0.00
Volume/Cap:  0.42 0.97  0.97  0.97 0.42  0.00  0.97 0.39  0.39  0.39 0.97  0.00
Uniform Del: 77.8 75.2  75.2  87.7 76.4   0.0  82.4 25.6  25.6  62.3 30.7   0.0
IncremntDel:  1.7 44.2  44.2  84.7  1.6   0.0  44.2  0.1   0.1   0.3  8.4   0.0
InitQueuDel:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
Delay Adj:   1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  0.00
Delay/Veh:   79.5  119 119.4 172.4 78.0   0.0 126.6 25.6  25.6  62.6 39.1   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  79.5  119 119.4 172.4 78.0   0.0 126.6 25.6  25.6  62.6 39.1   0.0
LOS by Move:    E    F     F     F    E     A     F    C     C     E    D     A
HCM2k95thQ:   160  690   690   182  173     0   426  439   439   268 2033     0
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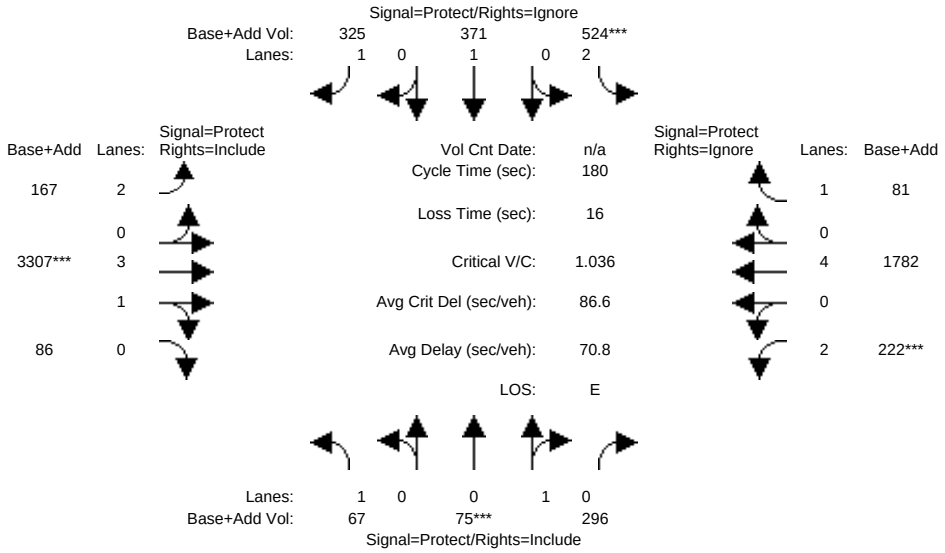
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing Plus Project PM

Intersection #6: O'Toole Ave/ McCarthy Blvd & Montague Expr



Street Name:	O'Toole Avenue/McCarthy Boulevard						Montague Expressway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	67	75	296	524	371	325	167	3302	86	222	1777	81
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	67	75	296	524	371	325	167	3302	86	222	1777	81
Added Vol:	0	0	0	0	0	0	0	5	0	0	5	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	67	75	296	524	371	325	167	3307	86	222	1782	81
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.91	0.91	0.00	0.96	0.96	0.96	0.85	0.85	0.00
PHF Volume:	71	79	312	576	408	0	174	3445	90	261	2096	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	71	79	312	576	408	0	174	3445	90	261	2096	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	71	79	312	576	408	0	174	3445	90	261	2096	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.97	1.00	1.00	0.97	0.91	0.91	0.97	0.91	1.00
Lanes:	1.00	0.20	0.80	2.00	1.00	1.00	2.00	3.90	0.10	2.00	4.00	1.00
Final Sat.:	1900	384	1516	3686	1900	1900	3686	6741	175	3686	6916	1900
Capacity Analysis Module:												
Vol/Sat:	0.04	0.21	0.21	0.16	0.21	0.00	0.05	0.51	0.51	0.07	0.30	0.00
Crit Moves:		****		****				****		****		
Green/Cycle:	0.05	0.20	0.20	0.15	0.30	0.00	0.08	0.49	0.49	0.07	0.49	0.00
Volume/Cap:	0.72	1.04	1.04	1.04	0.72	0.00	0.62	1.04	1.04	1.04	0.62	0.00
Uniform Del:	84.1	72.1	72.1	76.4	56.5	0.0	80.7	45.6	45.6	83.8	34.1	0.0
IncremntDel:	22.8	55.9	55.9	47.7	4.5	0.0	4.4	25.7	25.7	66.3	0.4	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	106.9	128	128.0	124.1	61.0	0.0	85.1	71.2	71.2	150.1	34.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	106.9	128	128.0	124.1	61.0	0.0	85.1	71.2	71.2	150.1	34.5	0.0
LOS by Move:	F	F	F	F	E	A	F	E	E	F	C	A
HCM2k95thQ:	202	894	894	726	695	0	222	1880	1880	406	762	0

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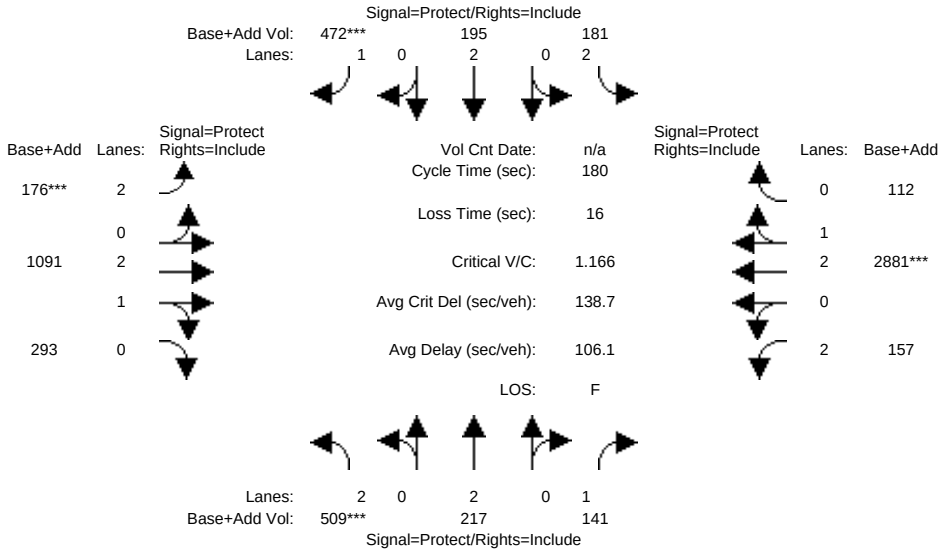
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing Plus Project AM

Intersection #7: S Main St/Oakland Road & Montague Expr



Street Name:	S Main Street/Oakland Road						Montague Expressway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	509	215	141	177	193	465	170	1091	293	157	2881	104
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	509	215	141	177	193	465	170	1091	293	157	2881	104
Added Vol:	0	2	0	4	2	7	6	0	0	0	0	8
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	509	217	141	181	195	472	176	1091	293	157	2881	112
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.90	0.90	0.90	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	547	233	152	201	217	524	180	1113	299	160	2940	114
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	547	233	152	201	217	524	180	1113	299	160	2940	114
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	547	233	152	201	217	524	180	1113	299	160	2940	114
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.91	0.91	0.97	0.91	0.91
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.36	0.64	2.00	2.89	0.11
Final Sat.:	3686	3610	1900	3686	3610	1900	3686	4089	1098	3686	4993	194
Capacity Analysis Module:												
Vol/Sat:	0.15	0.06	0.08	0.05	0.06	0.28	0.05	0.27	0.27	0.04	0.59	0.59
Crit Moves:	****					****	****				****	
Green/Cycle:	0.13	0.22	0.22	0.15	0.24	0.24	0.04	0.47	0.47	0.08	0.51	0.51
Volume/Cap:	1.17	0.30	0.37	0.37	0.25	1.17	1.17	0.58	0.58	0.58	1.17	1.17
Uniform Del:	78.5	59.1	60.1	69.1	55.8	68.7	86.2	34.5	34.5	80.5	44.5	44.5
IncremntDel:	95.6	0.2	0.6	0.4	0.2	96.3	124.0	0.3	0.3	3.0	79.1	79.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	174.1	59.3	60.6	69.5	55.9	165.0	210.2	34.9	34.9	83.5	124	123.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	174.1	59.3	60.6	69.5	55.9	165.0	210.2	34.9	34.9	83.5	124	123.6
LOS by Move:	F	E	E	E	E	F	F	C	C	F	F	F
HCM2k95thQ:	769	216	268	204	194	1258	334	682	682	202	2450	2450

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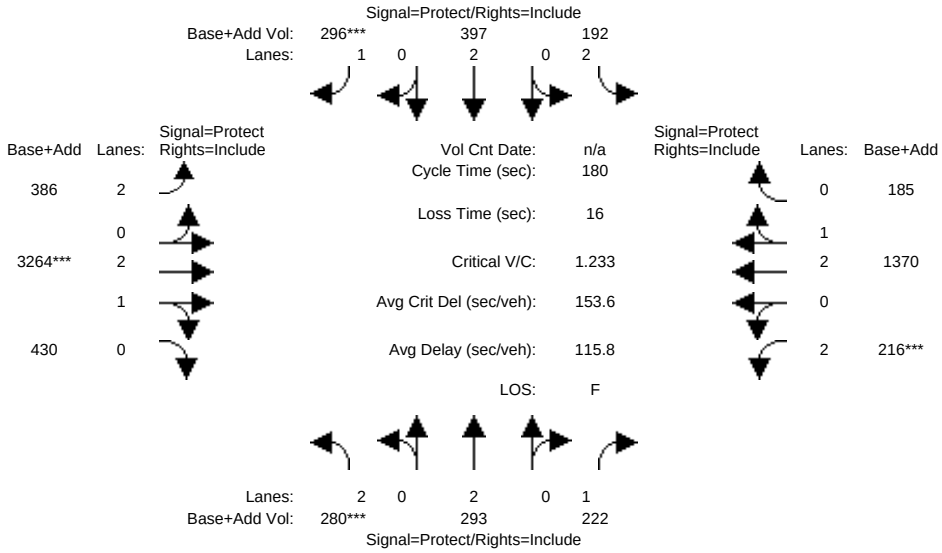
Existing Plus Project PM

Intersection #7: S Main St/Oakland Road & Montague Expr



Street Name:	S Main Street/Oakland Road						Montague Expressway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	280	290	222	187	394	287	375	3264	430	216	1370	171
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	280	290	222	187	394	287	375	3264	430	216	1370	171
Added Vol:	0	3	0	5	3	9	11	0	0	0	0	14
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	280	293	222	192	397	296	386	3264	430	216	1370	185
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.84	0.84	0.84	0.90	0.90	0.90	0.94	0.94	0.94
PHF Volume:	311	326	247	229	473	352	429	3627	478	230	1457	197
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	311	326	247	229	473	352	429	3627	478	230	1457	197
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	311	326	247	229	473	352	429	3627	478	230	1457	197
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.91	0.91	0.97	0.91	0.91
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.65	0.35	2.00	2.64	0.36
Final Sat.:	3686	3610	1900	3686	3610	1900	3686	4583	604	3686	4570	617
Capacity Analysis Module:												
Vol/Sat:	0.08	0.09	0.13	0.06	0.13	0.19	0.12	0.79	0.79	0.06	0.32	0.32
Crit Moves:	****					****		****		****		
Green/Cycle:	0.07	0.15	0.15	0.07	0.15	0.15	0.19	0.64	0.64	0.05	0.51	0.51
Volume/Cap:	1.23	0.61	0.88	0.88	0.87	1.23	0.63	1.23	1.23	1.23	0.63	0.63
Uniform Del:	83.8	71.8	75.1	82.9	74.7	76.5	67.6	32.2	32.2	85.5	32.1	32.1
IncremntDel:	134.4	2.0	25.1	26.6	14.2	131.5	1.9	108	107.7	142.5	0.5	0.5
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	218.2	73.8	100.2	109.5	88.9	207.9	69.5	140	139.9	228.0	32.6	32.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	218.2	73.8	100.2	109.5	88.9	207.9	69.5	140	139.9	228.0	32.6	32.6
LOS by Move:	F	E	F	F	F	F	E	F	F	F	C	C
HCM2k95thQ:	521	350	555	328	555	957	426	3464	3464	415	783	783

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Note: Queue reported is the distance per lane in feet.

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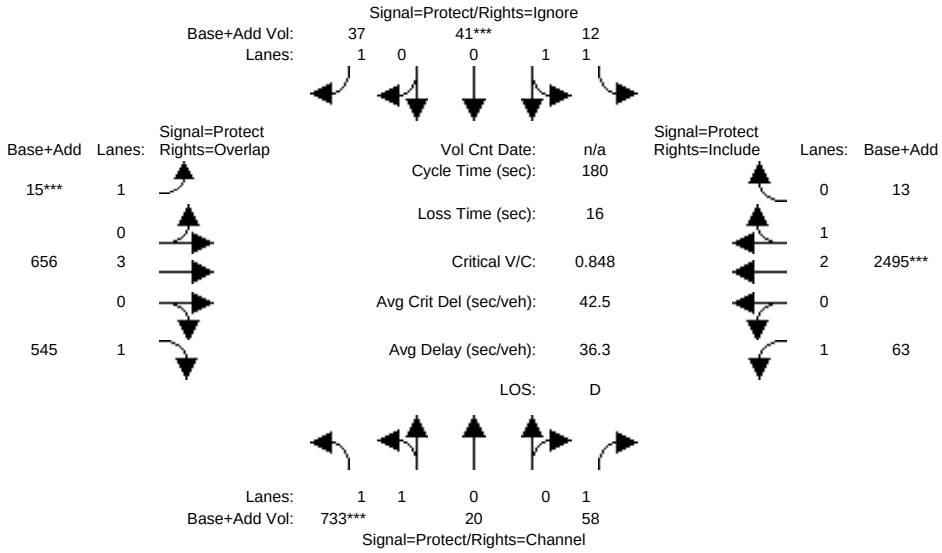
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing Plus Project AM

Intersection #8: McCandless DrZone Blvd & Montague Expr



Street Name:	Trade Zone Blvd/McCandless Dr						Montague Expressway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	727	20	58	12	41	37	15	656	541	63	2493	13
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	727	20	58	12	41	37	15	656	541	63	2493	13
Added Vol:	6	0	0	0	0	0	0	0	4	0	2	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	733	20	58	12	41	37	15	656	545	63	2495	13
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.00	0.88	0.88	0.88	0.93	0.93	0.93
PHF Volume:	814	22	64	13	46	0	17	745	619	68	2683	14
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	814	22	64	13	46	0	17	745	619	68	2683	14
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	814	22	64	13	46	0	17	745	619	68	2683	14
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Lanes:	1.95	0.05	1.00	1.00	1.00	1.00	1.00	3.00	1.00	1.00	2.98	0.02
Final Sat.:	3699	101	1900	1900	1900	1900	1900	5187	1900	1900	5160	27
Capacity Analysis Module:												
Vol/Sat:	0.22	0.22	0.03	0.01	0.02	0.00	0.01	0.14	0.33	0.04	0.52	0.52
Crit Moves:	****				****		****				****	
Green/Cycle:	0.26	0.28	0.28	0.01	0.03	0.00	0.01	0.50	0.76	0.12	0.61	0.61
Volume/Cap:	0.85	0.79	0.12	0.79	0.85	0.00	0.85	0.29	0.43	0.29	0.85	0.85
Uniform Del:	63.3	60.0	48.4	89.0	87.1	0.0	88.9	26.3	7.8	71.6	28.1	28.1
IncremntDel:	7.0	4.1	0.1	41.8	59.0	0.0	130.5	0.1	0.2	0.7	2.3	2.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	70.3	64.1	48.5	130.8	146	0.0	219.4	26.4	8.0	72.3	30.4	30.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	70.3	64.1	48.5	130.8	146	0.0	219.4	26.4	8.0	72.3	30.4	30.4
LOS by Move:	E	E	D	F	F	A	F	C	A	E	C	C
HCM2k95thQ:	790	750	103	72	166	0	87	315	428	124	1263	1263

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Note: Queue reported is the distance per lane in feet.

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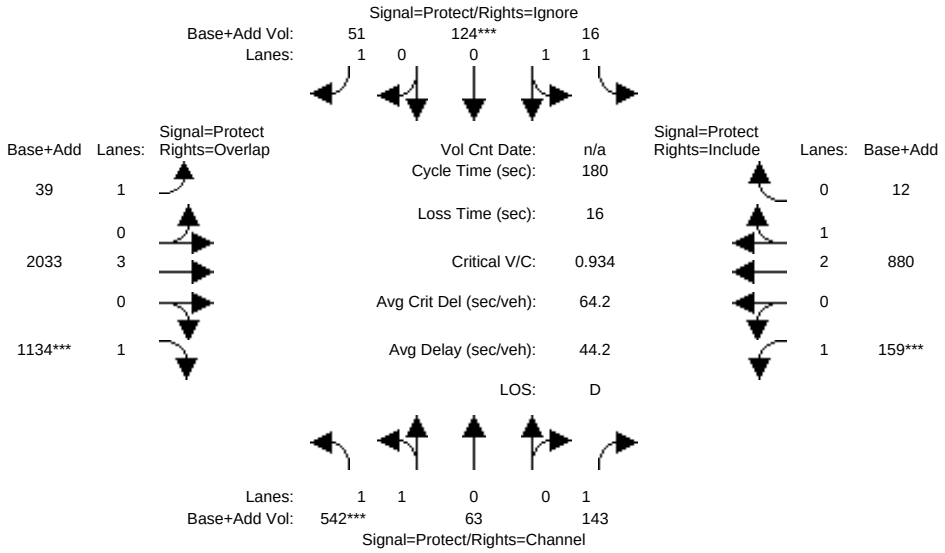
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing Plus Project PM

Intersection #8: McCandless DrZone Blvd & Montague Expr



Street Name:	Trade Zone Blvd/McCandless Dr						Montague Expressway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	532	63	143	16	124	51	39	2033	1129	159	876	12
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	532	63	143	16	124	51	39	2033	1129	159	876	12
Added Vol:	10	0	0	0	0	0	0	0	5	0	4	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	542	63	143	16	124	51	39	2033	1134	159	880	12
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.84	0.84	0.00	0.88	0.88	0.88	0.88	0.88	0.88
PHF Volume:	565	66	149	19	148	0	44	2310	1289	181	1000	14
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	565	66	149	19	148	0	44	2310	1289	181	1000	14
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	565	66	149	19	148	0	44	2310	1289	181	1000	14
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Lanes:	1.79	0.21	1.00	1.00	1.00	1.00	1.00	3.00	1.00	1.00	2.96	0.04
Final Sat.:	3404	396	1900	1900	1900	1900	1900	5187	1900	1900	5117	70
Capacity Analysis Module:												
Vol/Sat:	0.17	0.17	0.08	0.01	0.08	0.00	0.02	0.45	0.68	0.10	0.20	0.20
Crit Moves:	****				****				****	****		
Green/Cycle:	0.18	0.25	0.25	0.01	0.08	0.00	0.07	0.55	0.73	0.10	0.58	0.58
Volume/Cap:	0.93	0.67	0.32	0.67	0.93	0.00	0.34	0.81	0.93	0.93	0.34	0.34
Uniform Del:	73.0	61.4	55.5	88.2	82.0	0.0	79.8	33.1	21.0	80.2	19.6	19.6
IncremntDel:	20.1	2.0	0.4	7.2	48.5	0.0	1.5	1.9	11.8	46.1	0.1	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	93.1	63.3	55.9	95.4	131	0.0	81.3	34.9	32.8	126.4	19.7	19.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	93.1	63.3	55.9	95.4	131	0.0	81.3	34.9	32.8	126.4	19.7	19.7
LOS by Move:	F	E	E	F	F	A	F	C	C	F	B	B
HCM2k95thQ:	696	563	251	82	403	0	105	1200	1915	348	360	360

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Note: Queue reported is the distance per lane in feet.

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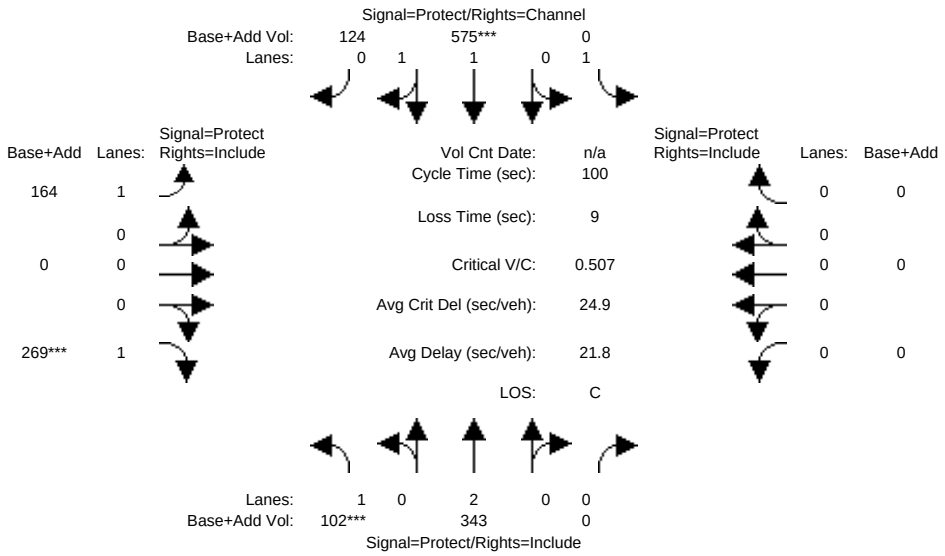
Appendix E – Level of Service Worksheets: Background Conditions

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing plus Approved (Background) AM

Intersection #1: South Main Street/Cedar Way/Project Driveway



Street Name:	S Main Street						Cedar Way/Project Driveway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	102	330	0	0	511	124	164	0	269	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	102	330	0	0	511	124	164	0	269	0	0	0
Added Vol:	0	13	0	0	64	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	102	343	0	0	575	124	164	0	269	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.96	0.96	0.96	0.87	0.87	0.87	1.00	1.00	1.00
PHF Volume:	111	373	0	0	599	129	189	0	309	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	111	373	0	0	599	129	189	0	309	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	111	373	0	0	599	129	189	0	309	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	1.00	1.00	0.92	0.92	0.95	1.00	0.85	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	1.00	1.64	0.36	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1805	3610	0	1900	2887	623	1805	0	1610	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.06	0.10	0.00	0.00	0.21	0.21	0.10	0.00	0.19	0.00	0.00	0.00
Crit Moves:	****				****				****			
Green/Cycle:	0.12	0.53	0.00	0.00	0.41	0.41	0.38	0.00	0.38	0.00	0.00	0.00
Volume/Cap:	0.51	0.19	0.00	0.00	0.51	0.51	0.28	0.00	0.51	0.00	0.00	0.00
Uniform Del:	41.1	12.3	0.0	0.0	22.0	22.0	21.5	0.0	23.8	0.0	0.0	0.0
IncremntDel:	1.9	0.0	0.0	0.0	0.3	0.3	0.2	0.0	0.7	0.0	0.0	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Delay/Veh:	43.1	12.3	0.0	0.0	22.3	22.3	21.7	0.0	24.5	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	43.1	12.3	0.0	0.0	22.3	22.3	21.7	0.0	24.5	0.0	0.0	0.0
LOS by Move:	D	B	A	A	C	C	C	A	C	A	A	A
HCM2k95thQ:	127	122	0	0	334	332	159	0	288	0	0	0

Note: Queue reported is the distance per lane in feet.

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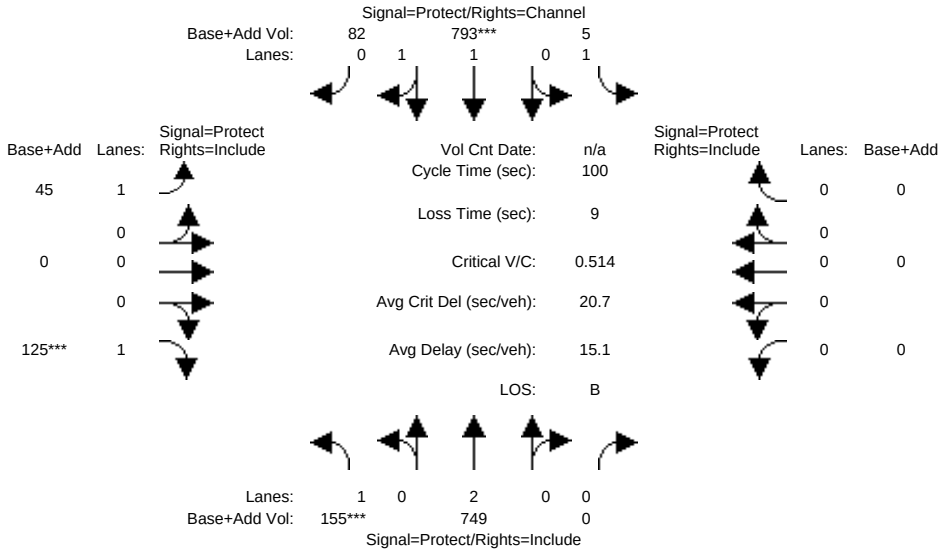
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing plus Approved (Background) PM

Intersection #1: South Main Street/Cedar Way/Project Driveway



Street Name:	S Main Street						Cedar Way/Project Driveway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	155	692	0	5	763	82	45	0	125	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	155	692	0	5	763	82	45	0	125	0	0	0
Added Vol:	0	57	0	0	30	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	155	749	0	5	793	82	45	0	125	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.86	0.86	0.86	0.89	0.89	0.89	0.85	0.85	0.85	1.00	1.00	1.00
PHF Volume:	180	871	0	6	891	92	53	0	147	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	180	871	0	6	891	92	53	0	147	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	180	871	0	6	891	92	53	0	147	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	1.00	0.95	0.94	0.93	0.95	1.00	0.85	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	1.00	1.81	0.19	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1805	3610	0	1805	3225	333	1805	0	1612	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.10	0.24	0.00	0.00	0.28	0.28	0.03	0.00	0.09	0.00	0.00	0.00
Crit Moves:	****				****				****			
Green/Cycle:	0.19	0.72	0.00	0.01	0.54	0.54	0.18	0.00	0.18	0.00	0.00	0.00
Volume/Cap:	0.51	0.33	0.00	0.33	0.51	0.51	0.17	0.00	0.51	0.00	0.00	0.00
Uniform Del:	36.0	5.1	0.0	49.2	14.7	14.7	34.8	0.0	37.2	0.0	0.0	0.0
IncremntDel:	1.3	0.1	0.0	11.3	0.2	0.2	0.2	0.0	1.6	0.0	0.0	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Delay/Veh:	37.3	5.1	0.0	60.6	15.0	15.0	35.1	0.0	38.8	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.3	5.1	0.0	60.6	15.0	15.0	35.1	0.0	38.8	0.0	0.0	0.0
LOS by Move:	D	A	A	E	B	B	D	A	D	A	A	A
HCM2k95thQ:	191	198	0	23	376	375	59	0	184	0	0	0

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Note: Queue reported is the distance per lane in feet.

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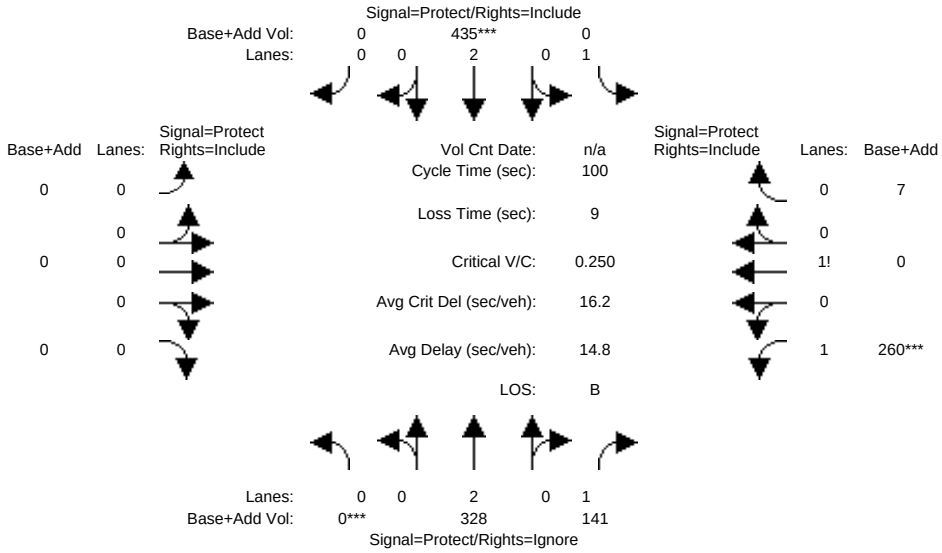
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing plus Approved (Background) AM

Intersection #2: South Main Street/South Abel Street



Street Name:	South Main Street						South Abel Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	321	136	0	400	0	0	0	0	231	0	7
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	321	136	0	400	0	0	0	0	231	0	7
Added Vol:	0	7	5	0	35	0	0	0	0	29	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	328	141	0	435	0	0	0	0	260	0	7
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.87	0.87	0.00	0.89	0.89	0.89	1.00	1.00	1.00	0.80	0.80	0.80
PHF Volume:	0	377	0	0	489	0	0	0	0	325	0	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	377	0	0	489	0	0	0	0	325	0	9
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	377	0	0	489	0	0	0	0	325	0	9
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.95
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	0.00	0.00	0.00	1.95	0.00	0.05
Final Sat.:	0	3610	1900	1900	3610	0	0	0	0	3518	0	92
Capacity Analysis Module:												
Vol/Sat:	0.00	0.10	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.09	0.00	0.09
Crit Moves:	****				****					****		
Green/Cycle:	0.00	0.54	0.00	0.00	0.54	0.00	0.00	0.00	0.00	0.37	0.00	0.37
Volume/Cap:	0.00	0.19	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.25	0.00	0.26
Uniform Del:	0.0	11.8	0.0	0.0	12.2	0.0	0.0	0.0	0.0	21.9	0.0	22.0
IncremntDel:	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	11.8	0.0	0.0	12.3	0.0	0.0	0.0	0.0	22.0	0.0	22.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	11.8	0.0	0.0	12.3	0.0	0.0	0.0	0.0	22.0	0.0	22.1
LOS by Move:	A	B	A	A	B	A	A	A	A	C	A	C
HCM2k95thQ:	0	123	0	0	163	0	0	0	0	142	0	146

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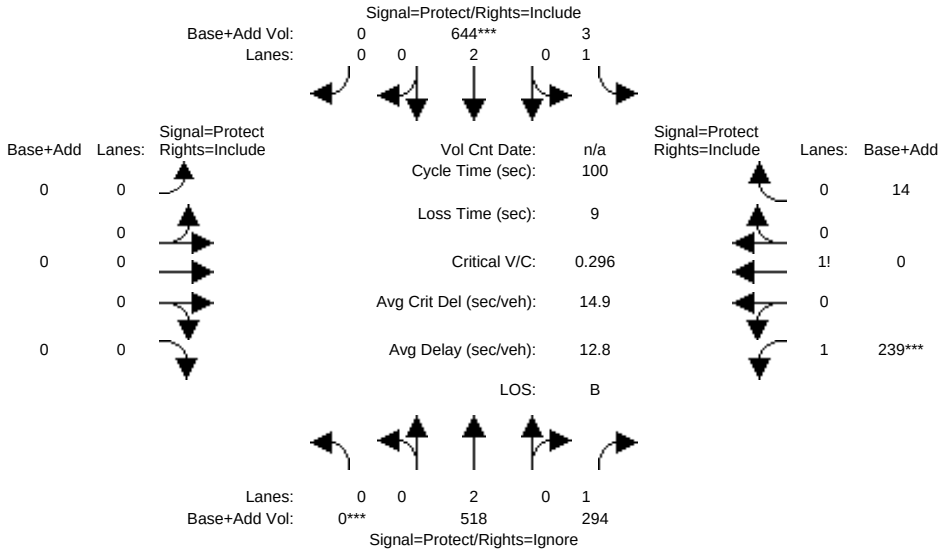
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing plus Approved (Background) PM

Intersection #2: South Main Street/South Abel Street



Street Name:	South Main Street						South Abel Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	484	271	3	627	0	0	0	0	225	0	14
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	484	271	3	627	0	0	0	0	225	0	14
Added Vol:	0	34	23	0	17	0	0	0	0	14	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	518	294	3	644	0	0	0	0	239	0	14
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.00	0.97	0.97	0.97	1.00	1.00	1.00	0.82	0.82	0.82
PHF Volume:	0	557	0	3	664	0	0	0	0	291	0	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	557	0	3	664	0	0	0	0	291	0	17
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	557	0	3	664	0	0	0	0	291	0	17
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.95
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	0.00	0.00	0.00	1.90	0.00	0.10
Final Sat.:	0	3610	1900	1805	3610	0	0	0	0	3411	0	189
Capacity Analysis Module:												
Vol/Sat:	0.00	0.15	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.09	0.00	0.09
Crit Moves:	****				****					****		
Green/Cycle:	0.00	0.61	0.00	0.01	0.62	0.00	0.00	0.00	0.00	0.29	0.00	0.29
Volume/Cap:	0.00	0.25	0.00	0.25	0.30	0.00	0.00	0.00	0.00	0.30	0.00	0.31
Uniform Del:	0.0	8.8	0.0	49.4	8.8	0.0	0.0	0.0	0.0	27.7	0.0	27.8
IncremntDel:	0.0	0.1	0.0	10.5	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	8.8	0.0	59.9	8.9	0.0	0.0	0.0	0.0	27.8	0.0	28.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	8.8	0.0	59.9	8.9	0.0	0.0	0.0	0.0	27.8	0.0	28.0
LOS by Move:	A	A	A	E	A	A	A	A	A	C	A	C
HCM2k95thQ:	0	160	0	15	193	0	0	0	0	149	0	158

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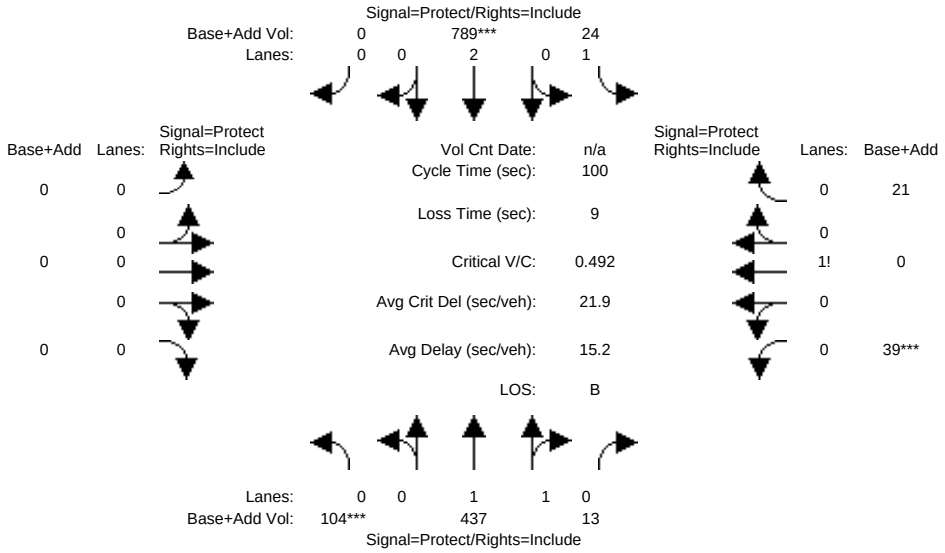
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing plus Approved (Background) AM

Intersection #3: South Main Street / Mihalakis Dr



Street Name:	South Main Street						Mihalakis Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	104	424	13	24	725	0	0	0	0	39	0	21
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	104	424	13	24	725	0	0	0	0	39	0	21
Added Vol:	0	13	0	0	64	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	104	437	13	24	789	0	0	0	0	39	0	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.88	0.88	0.88	1.00	1.00	1.00	0.88	0.88	0.88
PHF Volume:	107	451	13	27	897	0	0	0	0	44	0	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	107	451	13	27	897	0	0	0	0	44	0	24
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	107	451	13	27	897	0	0	0	0	44	0	24
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.94	0.94	0.95	0.95	1.00	1.00	1.00	1.00	0.92	1.00	0.92
Lanes:	0.37	1.58	0.05	1.00	2.00	0.00	0.00	0.00	0.00	0.65	0.00	0.35
Final Sat.:	670	2813	84	1805	3610	0	0	0	0	1138	0	613
Capacity Analysis Module:												
Vol/Sat:	0.16	0.16	0.16	0.02	0.25	0.00	0.00	0.00	0.00	0.04	0.00	0.04
Crit Moves:	****				****					****		
Green/Cycle:	0.33	0.76	0.76	0.07	0.51	0.00	0.00	0.00	0.00	0.08	0.00	0.08
Volume/Cap:	0.49	0.21	0.21	0.21	0.49	0.00	0.00	0.00	0.00	0.49	0.00	0.49
Uniform Del:	27.1	3.5	3.5	43.8	16.3	0.0	0.0	0.0	0.0	44.1	0.0	44.1
IncremntDel:	0.3	0.0	0.0	0.8	0.2	0.0	0.0	0.0	0.0	2.7	0.0	2.7
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	27.4	3.5	3.5	44.6	16.5	0.0	0.0	0.0	0.0	46.8	0.0	46.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.4	3.5	3.5	44.6	16.5	0.0	0.0	0.0	0.0	46.8	0.0	46.8
LOS by Move:	C	A	A	D	B	A	A	A	A	D	A	D
HCM2k95thQ:	289	107	107	32	343	0	0	0	0	109	0	108

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Note: Queue reported is the distance per lane in feet.

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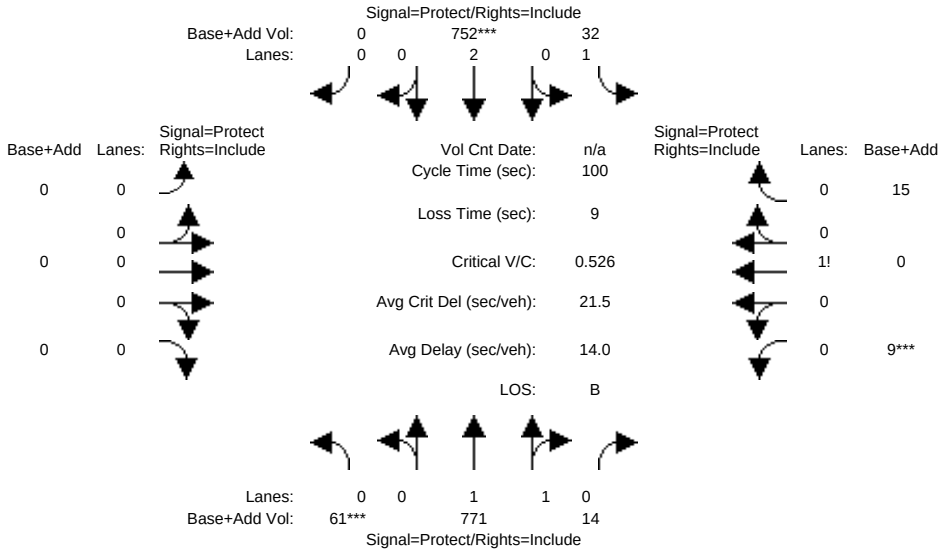
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing plus Approved (Background) PM

Intersection #3: South Main Street / Mihalakis Dr



Street Name:	South Main Street						Mihalakis Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	61	714	14	32	722	0	0	0	0	9	0	15
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	61	714	14	32	722	0	0	0	0	9	0	15
Added Vol:	0	57	0	0	30	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	61	771	14	32	752	0	0	0	0	9	0	15
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.96	0.96	0.96	1.00	1.00	1.00	0.75	0.75	0.75
PHF Volume:	63	795	14	33	783	0	0	0	0	12	0	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	63	795	14	33	783	0	0	0	0	12	0	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	63	795	14	33	783	0	0	0	0	12	0	20
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.94	0.94	0.95	0.95	1.00	1.00	1.00	1.00	0.90	1.00	0.89
Lanes:	0.14	1.83	0.03	1.00	2.00	0.00	0.00	0.00	0.00	0.37	0.00	0.63
Final Sat.:	258	3267	59	1805	3610	0	0	0	0	638	0	1063
Capacity Analysis Module:												
Vol/Sat:	0.24	0.24	0.24	0.02	0.22	0.00	0.00	0.00	0.00	0.02	0.00	0.02
Crit Moves:	****				****					****		
Green/Cycle:	0.46	0.81	0.81	0.06	0.41	0.00	0.00	0.00	0.00	0.04	0.00	0.04
Volume/Cap:	0.53	0.30	0.30	0.30	0.53	0.00	0.00	0.00	0.00	0.53	0.00	0.53
Uniform Del:	19.1	2.3	2.3	44.9	22.1	0.0	0.0	0.0	0.0	47.4	0.0	47.4
IncremntDel:	0.3	0.1	0.1	1.5	0.4	0.0	0.0	0.0	0.0	8.3	0.0	8.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	19.4	2.4	2.4	46.4	22.4	0.0	0.0	0.0	0.0	55.7	0.0	55.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	19.4	2.4	2.4	46.4	22.4	0.0	0.0	0.0	0.0	55.7	0.0	55.7
LOS by Move:	B	A	A	D	C	A	A	A	A	E	A	E
HCM2k95thQ:	374	143	143	40	342	0	0	0	0	72	0	72

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Note: Queue reported is the distance per lane in feet.

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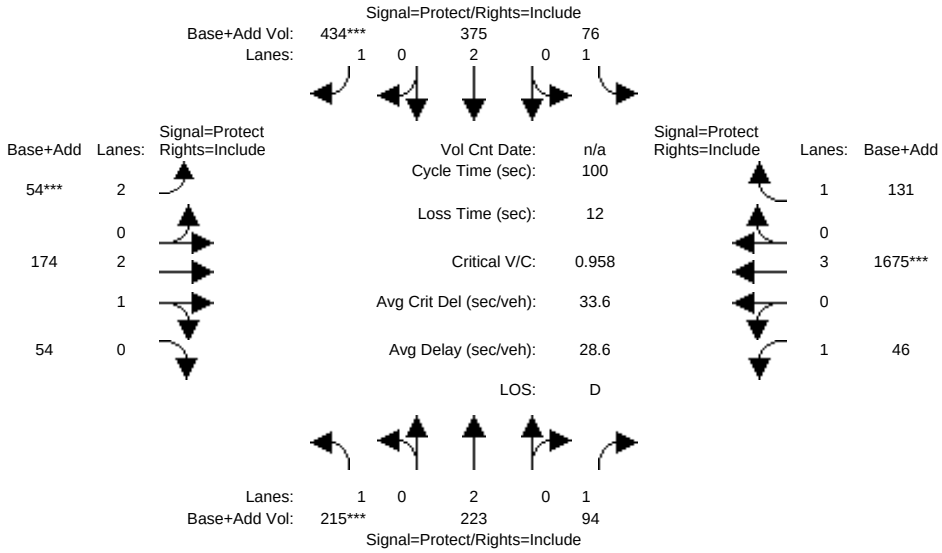
Level Of Service Computation Report
1994 HCM Operations (Future Volume Alternative)
Existing plus Approved (Background) AM

Intersection #4: Great Mall and Abel



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	191	220	47	70	374	434	54	136	49	46	1517	107
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	191	220	47	70	374	434	54	136	49	46	1517	107
Added Vol:	24	3	47	6	1	0	0	38	5	0	158	24
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	215	223	94	76	375	434	54	174	54	46	1675	131
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.81	0.81	0.81	0.93	0.93	0.93	0.89	0.89	0.89	0.83	0.83	0.83
PHF Volume:	265	275	116	82	403	467	61	196	61	55	2018	158
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	265	275	116	82	403	467	61	196	61	55	2018	158
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.00	1.00	1.05	1.00	1.03	1.10	1.10	1.00	1.10	1.00
FinalVolume:	265	289	116	82	423	467	62	215	67	55	2220	158
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.96	0.96	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	2.00	2.29	0.71	1.00	3.00	1.00
Final Sat.:	1805	3800	1615	1805	3800	1615	3610	4176	1296	1805	5700	1615
Capacity Analysis Module:												
Vol/Sat:	0.15	0.08	0.07	0.05	0.11	0.29	0.02	0.05	0.05	0.03	0.39	0.10
Crit Moves:	****					****	****				****	
Green/Cycle:	0.15	0.29	0.29	0.17	0.30	0.30	0.02	0.27	0.27	0.16	0.41	0.41
Volume/Cap:	0.96	0.27	0.25	0.27	0.37	0.96	0.96	0.19	0.19	0.19	0.96	0.24
Uniform Del:	31.9	21.0	20.9	27.4	20.9	26.1	37.3	21.6	21.6	27.8	21.9	14.8
IncremntDel:	31.2	0.0	0.1	0.1	0.1	22.2	70.5	0.0	0.0	0.0	7.8	0.0
Delay Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Delay/Veh:	58.3	17.9	17.8	23.4	17.8	44.4	102.2	18.4	18.4	23.6	26.5	12.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	58.3	17.9	17.8	23.4	17.8	44.4	102.2	18.4	18.4	23.6	26.5	12.6
DesignQueue:	257	117	93	76	168	382	34	77	77	52	532	106

Note: Queue reported is the distance per lane in feet.

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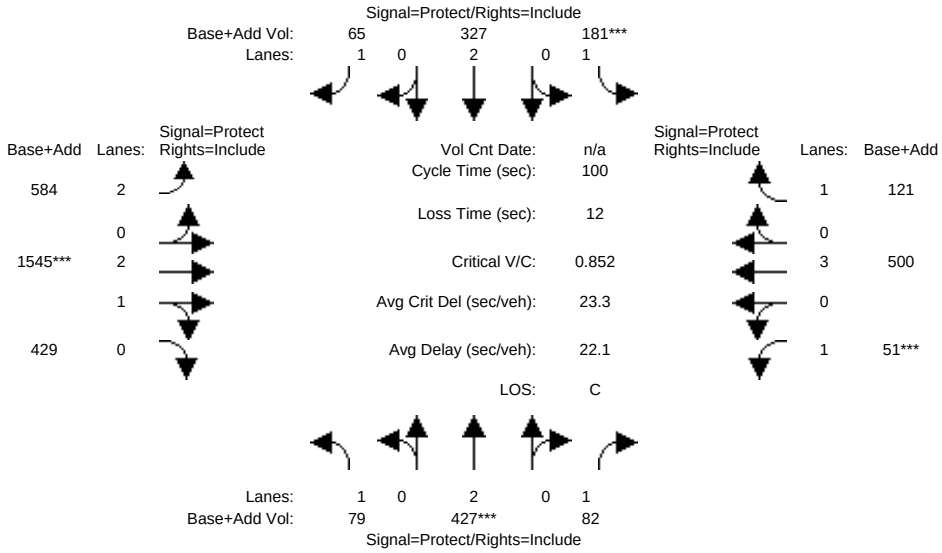
Level Of Service Computation Report
1994 HCM Operations (Future Volume Alternative)
Existing plus Approved (Background) PM

Intersection #4: Great Mall and Abel



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	68	425	60	158	324	65	584	1393	406	51	420	109
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	68	425	60	158	324	65	584	1393	406	51	420	109
Added Vol:	11	2	22	23	3	0	0	152	23	0	80	12
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	79	427	82	181	327	65	584	1545	429	51	500	121
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.68	0.68	0.68	0.82	0.82	0.82	0.94	0.94	0.94	0.78	0.78	0.78
PHF Volume:	116	628	121	221	399	79	621	1644	456	65	641	155
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	116	628	121	221	399	79	621	1644	456	65	641	155
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.00	1.00	1.05	1.00	1.03	1.10	1.10	1.00	1.10	1.00
FinalVolume:	116	659	121	221	419	79	640	1808	502	65	705	155
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.97	0.97	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	2.00	2.35	0.65	1.00	3.00	1.00
Final Sat.:	1805	3800	1615	1805	3800	1615	3610	4327	1202	1805	5700	1615
Capacity Analysis Module:												
Vol/Sat:	0.06	0.17	0.07	0.12	0.11	0.05	0.18	0.42	0.42	0.04	0.12	0.10
Crit Moves:		****		****				****		****		
Green/Cycle:	0.13	0.20	0.20	0.14	0.22	0.22	0.31	0.49	0.49	0.04	0.22	0.22
Volume/Cap:	0.50	0.85	0.37	0.85	0.50	0.22	0.56	0.85	0.85	0.85	0.56	0.44
Uniform Del:	30.9	29.2	26.0	31.8	26.0	24.4	21.7	17.0	17.0	36.1	26.4	25.6
IncremntDel:	1.5	6.4	0.3	15.7	0.4	0.1	0.5	2.0	2.0	37.5	0.5	0.6
Delay Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Delay/Veh:	27.7	31.2	22.5	42.7	22.6	20.8	19.0	16.4	16.4	68.3	22.9	22.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.7	31.2	22.5	42.7	22.6	20.8	19.0	16.4	16.4	68.3	22.9	22.4
DesignQueue:	114	303	108	215	186	69	253	477	477	70	209	137

Note: Queue reported is the distance per lane in feet.

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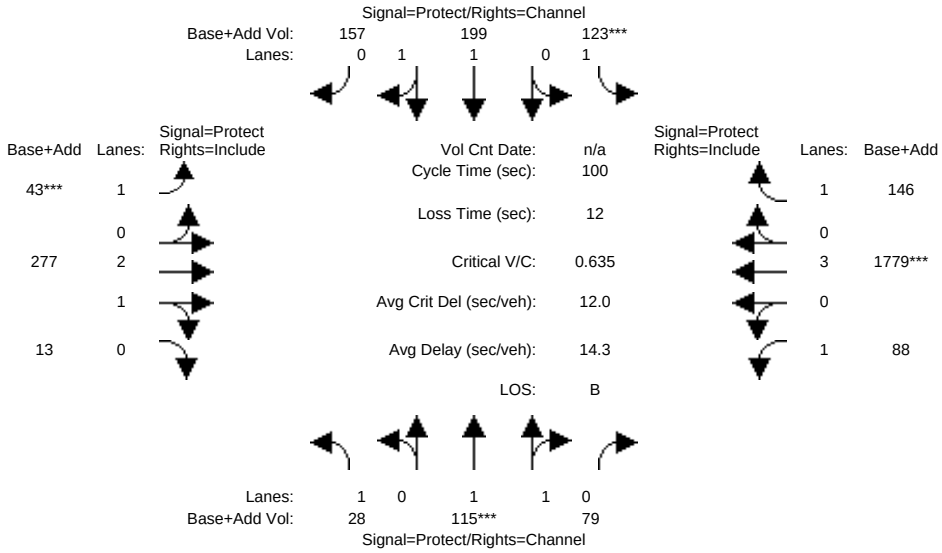
Level Of Service Computation Report
1994 HCM Operations (Future Volume Alternative)
Existing plus Approved (Background) AM

Intersection #5: Great Mall & South Main



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	11	113	53	118	198	157	40	194	9	72	1614	124
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	11	113	53	118	198	157	40	194	9	72	1614	124
Added Vol:	17	2	26	5	1	0	3	83	4	16	165	22
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	28	115	79	123	199	157	43	277	13	88	1779	146
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.76	0.76	0.76	0.90	0.90	0.90	0.78	0.78	0.78	0.91	0.91	0.91
PHF Volume:	37	151	104	137	221	174	55	355	17	97	1955	160
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	37	151	104	137	221	174	55	355	17	97	1955	160
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.10	1.10	1.00	1.10	1.00
FinalVolume:	37	159	109	137	232	183	55	391	18	97	2150	160
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.93	0.93	0.95	0.99	0.99	0.95	1.00	0.85
Lanes:	1.00	1.19	0.81	1.00	1.12	0.88	1.00	2.87	0.13	1.00	3.00	1.00
Final Sat.:	1805	2117	1455	1805	1975	1559	1805	5390	253	1805	5700	1615
Capacity Analysis Module:												
Vol/Sat:	0.02	0.08	0.08	0.08	0.12	0.12	0.03	0.07	0.07	0.05	0.38	0.10
Crit Moves:		****		****			****				****	
Green/Cycle:	0.04	0.12	0.12	0.12	0.20	0.20	0.05	0.37	0.37	0.27	0.59	0.59
Volume/Cap:	0.58	0.63	0.63	0.63	0.58	0.58	0.63	0.20	0.20	0.20	0.63	0.17
Uniform Del:	36.1	31.9	31.9	31.9	27.4	27.4	35.5	16.3	16.3	21.2	10.0	6.9
IncremntDel:	8.7	2.2	2.2	4.2	0.9	0.9	9.4	0.0	0.0	0.0	0.3	0.0
Delay Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Delay/Veh:	39.4	29.4	29.4	31.3	24.2	24.2	39.6	13.9	13.9	18.1	8.8	5.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	39.4	29.4	29.4	31.3	24.2	24.2	39.6	13.9	13.9	18.1	8.8	5.9
DesignQueue:	40	133	133	136	188	188	59	97	97	79	351	74

Note: Queue reported is the distance per lane in feet.

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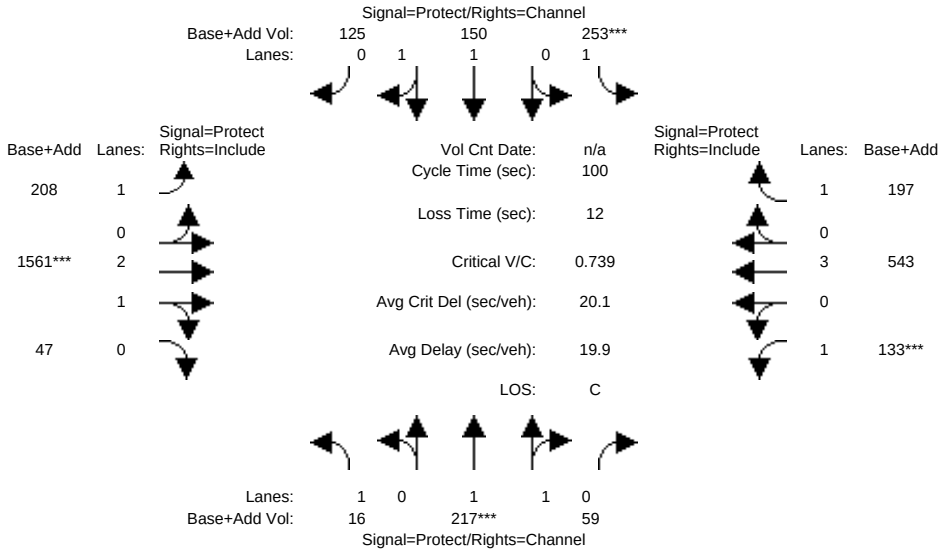
Level Of Service Computation Report
1994 HCM Operations (Future Volume Alternative)
Existing plus Approved (Background) PM

Intersection #5: Great Mall & South Main



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	8	216	46	232	145	125	206	1381	31	62	459	186
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	216	46	232	145	125	206	1381	31	62	459	186
Added Vol:	8	1	13	21	5	0	2	180	16	71	84	11
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	16	217	59	253	150	125	208	1561	47	133	543	197
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.87	0.87	0.87	0.95	0.95	0.95	0.97	0.97	0.97
PHF Volume:	18	238	65	291	172	144	219	1643	49	137	560	203
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	18	238	65	291	172	144	219	1643	49	137	560	203
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.10	1.10	1.00	1.10	1.00
FinalVolume:	18	250	68	291	181	151	219	1807	54	137	616	203
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.97	0.97	0.95	0.93	0.93	0.95	1.00	1.00	0.95	1.00	0.84
Lanes:	1.00	1.57	0.43	1.00	1.09	0.91	1.00	2.91	0.09	1.00	3.00	1.00
Final Sat.:	1805	2898	788	1805	1928	1606	1805	5533	167	1805	5700	1596
Capacity Analysis Module:												
Vol/Sat:	0.01	0.09	0.09	0.16	0.09	0.09	0.12	0.33	0.33	0.08	0.11	0.13
Crit Moves:		****		****				****		****		
Green/Cycle:	0.03	0.12	0.12	0.22	0.30	0.30	0.27	0.44	0.44	0.10	0.28	0.28
Volume/Cap:	0.31	0.74	0.74	0.74	0.31	0.31	0.46	0.74	0.74	0.74	0.39	0.46
Uniform Del:	36.0	32.4	32.4	27.7	20.3	20.3	23.3	17.6	17.6	33.1	22.1	22.6
IncremntDel:	1.0	4.5	4.5	4.9	0.1	0.1	0.5	0.8	0.8	9.6	0.1	0.5
Delay Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Delay/Veh:	31.6	32.1	32.1	28.5	17.3	17.3	20.3	15.8	15.8	37.8	18.9	19.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.6	32.1	32.1	28.5	17.3	17.3	20.3	15.8	15.8	37.8	18.9	19.8
DesignQueue:	19	159	159	261	131	131	183	413	413	139	168	166

Note: Queue reported is the distance per lane in feet.

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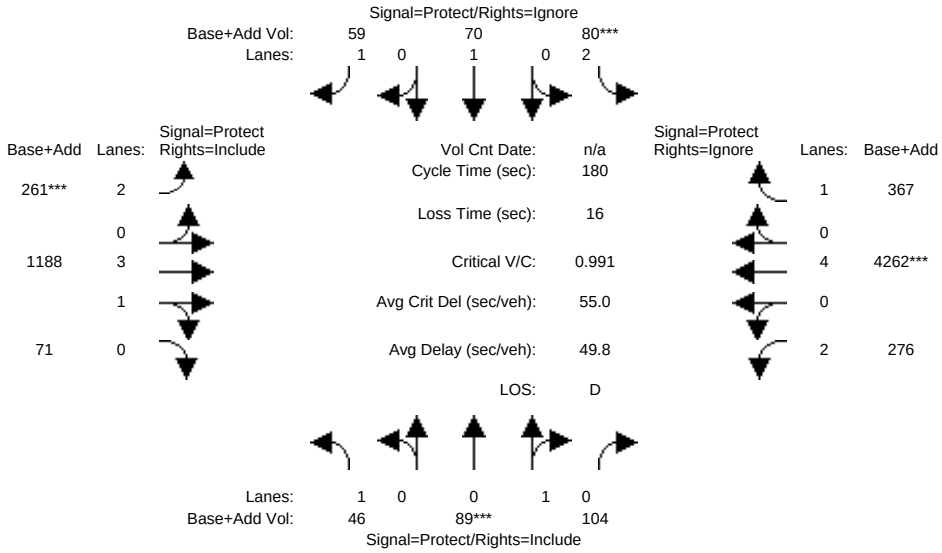
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing plus Approved (Background) AM

Intersection #6: O'Toole Ave/ McCarthy Blvd & Montague Expr

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Street Name:O'Toole Avenue/McCarthy Boulevard        Montague Expressway
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Y+R:          4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0   4.0  4.0   4.0
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:      46   89   104    80   70    59   261 1162    71   276 4153   367
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   46   89   104    80   70    59   261 1162    71   276 4153   367
Added Vol:      0    0     0     0    0     0     0   26     0     0  109     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   46   89   104    80   70    59   261 1188    71   276 4262   367
User Adj:    1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  0.00
PHF Adj:     0.65 0.65  0.65  0.89 0.89  0.00  0.88 0.88  0.88  0.96 0.96  0.00
PHF Volume:    71  137   160    90   79     0   297 1350    81   288 4440     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   71  137   160    90   79     0   297 1350    81   288 4440     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  0.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  0.00
FinalVolume:   71  137   160    90   79     0   297 1350    81   288 4440     0
------------|---------------||---------------||---------------||---------------|
Saturation Flow Module:
Sat/Lane:    1900 1900  1900  1900 1900  1900  1900 1900  1900  1900 1900  1900
Adjustment:  1.00 1.00  1.00  0.97 1.00  1.00  0.97 0.91  0.91  0.97 0.91  1.00
Lanes:       1.00 0.46  0.54  2.00 1.00  1.00  2.00 3.77  0.23  2.00 4.00  1.00
Final Sat.:  1900  876  1024  3686 1900  1900  3686 6526   390  3686 6916  1900
------------|---------------||---------------||---------------||---------------|
Capacity Analysis Module:
Vol/Sat:     0.04 0.16  0.16  0.02 0.04  0.00  0.08 0.21  0.21  0.08 0.64  0.00
Crit Moves:       ****        ****              ****                   ****
Green/Cycle: 0.09 0.16  0.16  0.02 0.10  0.00  0.08 0.53  0.53  0.20 0.65  0.00
Volume/Cap:  0.43 0.99  0.99  0.99 0.43  0.00  0.99 0.39  0.39  0.39 0.99  0.00
Uniform Del: 78.0 75.7  75.7  87.8 76.7   0.0  82.6 25.1  25.1  62.5 31.2   0.0
IncremntDel:  1.8 49.4  49.4  91.5  1.6   0.0  49.5  0.1   0.1   0.3 11.5   0.0
InitQueuDel:  0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0   0.0  0.0   0.0
Delay Adj:   1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  0.00
Delay/Veh:   79.9  125 125.1 179.2 78.4   0.0 132.1 25.2  25.2  62.9 42.7   0.0
User DelAdj: 1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
AdjDel/Veh:  79.9  125 125.1 179.2 78.4   0.0 132.1 25.2  25.2  62.9 42.7   0.0
LOS by Move:    E    F     F     F    E     A     F    C     C     E    D     A
HCM2k95thQ:   161  701   701   184  174     0   432  444   444   269 2167     0
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Note: Queue reported is the distance per lane in feet.

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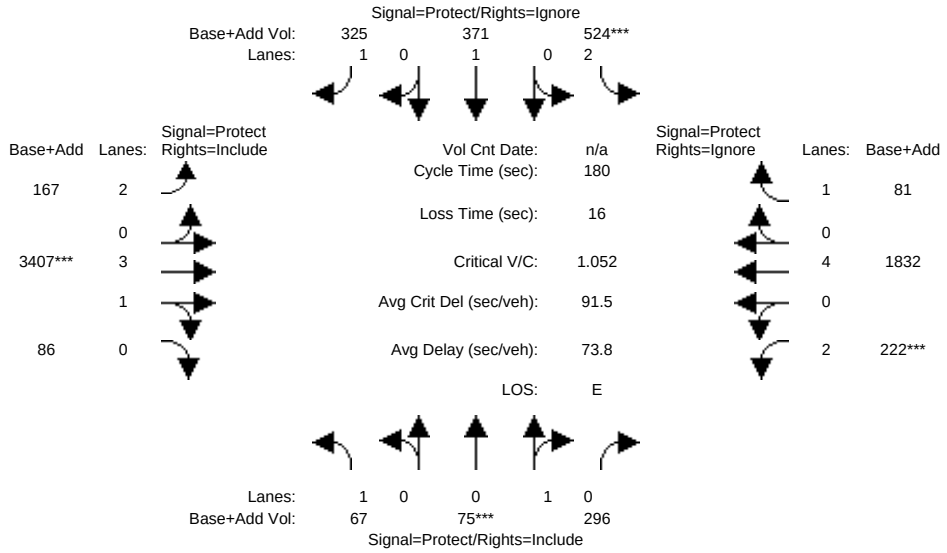
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing plus Approved (Background) PM

Intersection #6: O'Toole Ave/ McCarthy Blvd & Montague Expr



Street Name:	O'Toole Avenue/McCarthy Boulevard						Montague Expressway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	67	75	296	524	371	325	167	3302	86	222	1777	81
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	67	75	296	524	371	325	167	3302	86	222	1777	81
Added Vol:	0	0	0	0	0	0	0	105	0	0	55	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	67	75	296	524	371	325	167	3407	86	222	1832	81
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.91	0.91	0.00	0.96	0.96	0.96	0.85	0.85	0.00
PHF Volume:	71	79	312	576	408	0	174	3549	90	261	2155	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	71	79	312	576	408	0	174	3549	90	261	2155	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	71	79	312	576	408	0	174	3549	90	261	2155	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.97	1.00	1.00	0.97	0.91	0.91	0.97	0.91	1.00
Lanes:	1.00	0.20	0.80	2.00	1.00	1.00	2.00	3.90	0.10	2.00	4.00	1.00
Final Sat.:	1900	384	1516	3686	1900	1900	3686	6746	170	3686	6916	1900
Capacity Analysis Module:												
Vol/Sat:	0.04	0.21	0.21	0.16	0.21	0.00	0.05	0.53	0.53	0.07	0.31	0.00
Crit Moves:		****		****				****		****		
Green/Cycle:	0.05	0.20	0.20	0.15	0.29	0.00	0.07	0.50	0.50	0.07	0.49	0.00
Volume/Cap:	0.73	1.05	1.05	1.05	0.73	0.00	0.63	1.05	1.05	1.05	0.63	0.00
Uniform Del:	84.2	72.4	72.4	76.6	57.3	0.0	80.9	45.0	45.0	83.9	33.6	0.0
IncremntDel:	24.8	61.1	61.1	52.9	5.0	0.0	4.7	31.4	31.4	71.5	0.4	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	109.0	134	133.5	129.6	62.2	0.0	85.6	76.4	76.4	155.5	34.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	109.0	134	133.5	129.6	62.2	0.0	85.6	76.4	76.4	155.5	34.0	0.0
LOS by Move:	F	F	F	F	E	A	F	E	E	F	C	A
HCM2k95thQ:	204	906	906	736	702	0	223	1962	1962	410	781	0

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Note: Queue reported is the distance per lane in feet.

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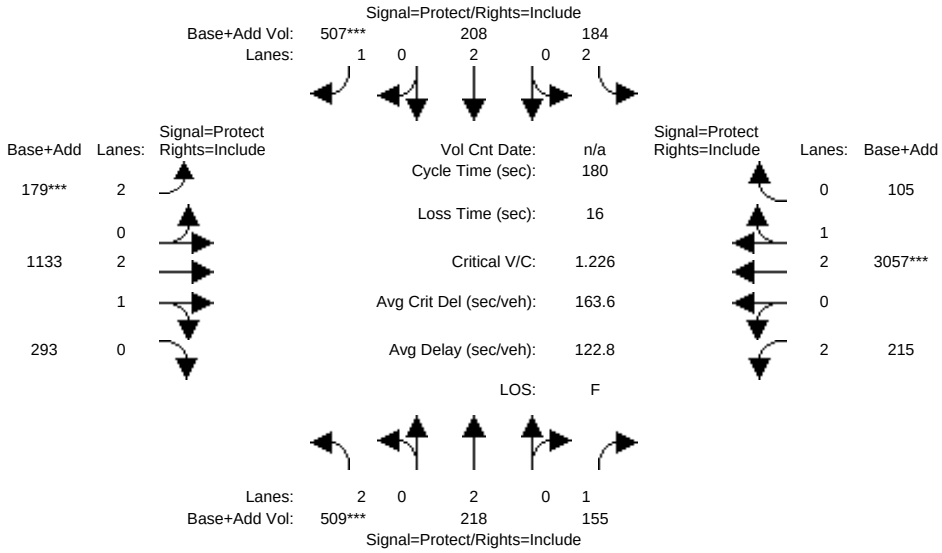
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing plus Approved (Background) AM

Intersection #7: S Main St/Oakland Road & Montague Expr



Street Name:	S Main Street/Oakland Road						Montague Expressway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	509	215	141	177	193	465	170	1091	293	157	2881	104
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	509	215	141	177	193	465	170	1091	293	157	2881	104
Added Vol:	0	3	14	7	15	42	9	42	0	58	176	1
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	509	218	155	184	208	507	179	1133	293	215	3057	105
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.90	0.90	0.90	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	547	234	167	204	231	563	183	1156	299	219	3119	107
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	547	234	167	204	231	563	183	1156	299	219	3119	107
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	547	234	167	204	231	563	183	1156	299	219	3119	107
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.91	0.91	0.97	0.91	0.91
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.38	0.62	2.00	2.90	0.10
Final Sat.:	3686	3610	1900	3686	3610	1900	3686	4121	1066	3686	5015	172
Capacity Analysis Module:												
Vol/Sat:	0.15	0.06	0.09	0.06	0.06	0.30	0.05	0.28	0.28	0.06	0.62	0.62
Crit Moves:	****					****	****				****	
Green/Cycle:	0.12	0.22	0.22	0.14	0.24	0.24	0.04	0.45	0.45	0.10	0.51	0.51
Volume/Cap:	1.23	0.29	0.39	0.39	0.26	1.23	1.23	0.62	0.62	0.62	1.23	1.23
Uniform Del:	79.1	58.2	59.6	70.4	55.3	68.2	86.4	37.6	37.6	78.2	44.3	44.3
IncremntDel:	120.0	0.2	0.6	0.5	0.2	119.5	146.8	0.5	0.5	3.4	105	105.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	199.1	58.4	60.3	70.9	55.4	187.8	233.2	38.1	38.1	81.6	149	149.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	199.1	58.4	60.3	70.9	55.4	187.8	233.2	38.1	38.1	81.6	149	149.4
LOS by Move:	F	E	E	E	E	F	F	D	D	F	F	F
HCM2k95thQ:	799	215	293	211	206	1401	349	734	734	261	2735	2735

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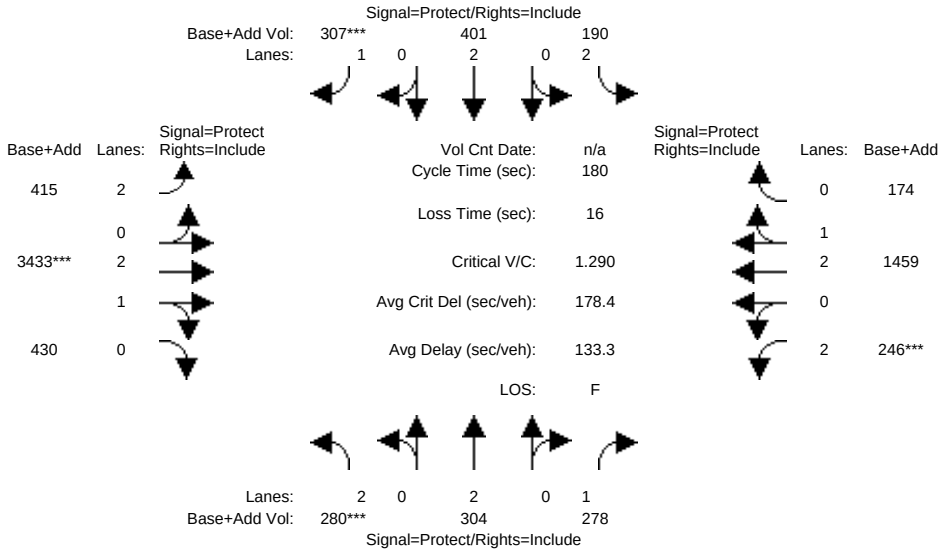
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing plus Approved (Background) PM

Intersection #7: S Main St/Oakland Road & Montague Expr



Street Name:	S Main Street/Oakland Road						Montague Expressway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	280	290	222	187	394	287	375	3264	430	216	1370	171
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	280	290	222	187	394	287	375	3264	430	216	1370	171
Added Vol:	0	14	56	3	7	20	40	169	0	30	89	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	280	304	278	190	401	307	415	3433	430	246	1459	174
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.84	0.84	0.84	0.90	0.90	0.90	0.94	0.94	0.94
PHF Volume:	311	338	309	226	477	365	461	3814	478	262	1552	185
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	311	338	309	226	477	365	461	3814	478	262	1552	185
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	311	338	309	226	477	365	461	3814	478	262	1552	185
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.91	0.91	0.97	0.91	0.91
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.67	0.33	2.00	2.68	0.32
Final Sat.:	3686	3610	1900	3686	3610	1900	3686	4610	577	3686	4634	553
Capacity Analysis Module:												
Vol/Sat:	0.08	0.09	0.16	0.06	0.13	0.19	0.13	0.83	0.83	0.07	0.33	0.33
Crit Moves:	****					****		****		****		
Green/Cycle:	0.07	0.16	0.16	0.06	0.15	0.15	0.19	0.64	0.64	0.06	0.51	0.51
Volume/Cap:	1.29	0.60	1.04	1.04	0.89	1.29	0.66	1.29	1.29	1.29	0.66	0.66
Uniform Del:	84.1	70.8	76.0	84.7	75.1	76.6	67.6	32.3	32.3	85.0	32.9	32.9
IncremntDel:	157.9	1.8	64.2	73.1	16.3	154.4	2.4	133	132.8	162.2	0.6	0.6
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	242.0	72.6	140.2	157.8	91.3	230.9	69.9	165	165.1	247.3	33.5	33.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	242.0	72.6	140.2	157.8	91.3	230.9	69.9	165	165.1	247.3	33.5	33.5
LOS by Move:	F	E	F	F	F	F	E	F	F	F	C	C
HCM2k95thQ:	537	357	753	368	567	1022	458	3807	3807	471	837	837

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Note: Queue reported is the distance per lane in feet.

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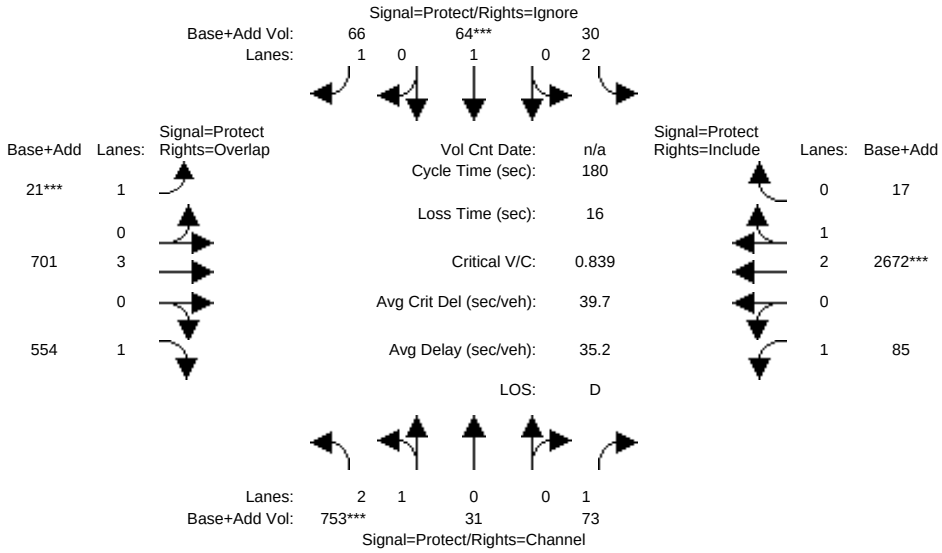
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing plus Approved (Background) AM

Intersection #8: McCandless DrZone Blvd & Montague Expr



Street Name:	Trade Zone Blvd/McCandless Dr						Montague Expressway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	727	20	58	12	41	37	15	656	541	63	2493	13
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	727	20	58	12	41	37	15	656	541	63	2493	13
Added Vol:	26	11	15	18	23	29	6	45	13	22	179	4
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	753	31	73	30	64	66	21	701	554	85	2672	17
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.00	0.88	0.88	0.88	0.93	0.93	0.93
PHF Volume:	837	34	81	33	71	0	24	797	630	91	2873	18
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	837	34	81	33	71	0	24	797	630	91	2873	18
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	837	34	81	33	71	0	24	797	630	91	2873	18
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.97	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Lanes:	2.88	0.12	1.00	2.00	1.00	1.00	1.00	3.00	1.00	1.00	2.98	0.02
Final Sat.:	5317	219	1900	3686	1900	1900	1900	5187	1900	1900	5154	33
Capacity Analysis Module:												
Vol/Sat:	0.16	0.16	0.04	0.01	0.04	0.00	0.01	0.15	0.33	0.05	0.56	0.56
Crit Moves:	****				****		****				****	
Green/Cycle:	0.19	0.22	0.22	0.01	0.04	0.00	0.01	0.53	0.72	0.15	0.66	0.66
Volume/Cap:	0.84	0.72	0.19	0.72	0.84	0.00	0.84	0.29	0.46	0.33	0.84	0.84
Uniform Del:	70.5	65.1	57.3	88.5	85.3	0.0	88.4	23.3	10.6	68.8	22.9	22.9
IncremntDel:	6.2	2.1	0.2	41.7	49.1	0.0	102.0	0.1	0.2	0.7	2.0	2.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	76.7	67.2	57.5	130.2	134	0.0	190.4	23.4	10.8	69.5	24.9	24.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	76.7	67.2	57.5	130.2	134	0.0	190.4	23.4	10.8	69.5	24.9	24.9
LOS by Move:	E	E	E	F	F	A	F	C	B	E	C	C
HCM2k95thQ:	617	561	141	80	224	0	107	318	499	163	1273	1273

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Note: Queue reported is the distance per lane in feet.

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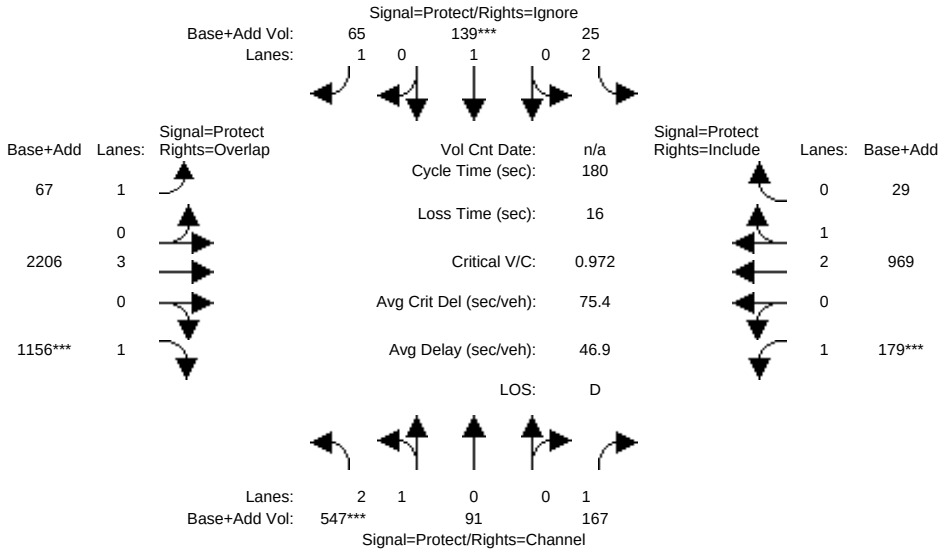
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing plus Approved (Background) PM

Intersection #8: McCandless DrZone Blvd & Montague Expr



Street Name:	Trade Zone Blvd/McCandless Dr						Montague Expressway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	532	63	143	16	124	51	39	2033	1129	159	876	12
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	532	63	143	16	124	51	39	2033	1129	159	876	12
Added Vol:	15	28	24	9	15	14	28	173	27	20	93	17
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	547	91	167	25	139	65	67	2206	1156	179	969	29
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.84	0.84	0.00	0.88	0.88	0.88	0.88	0.88	0.88
PHF Volume:	570	95	174	30	165	0	76	2507	1314	203	1101	33
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	570	95	174	30	165	0	76	2507	1314	203	1101	33
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	570	95	174	30	165	0	76	2507	1314	203	1101	33
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.97	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Lanes:	2.58	0.42	1.00	2.00	1.00	1.00	1.00	3.00	1.00	1.00	2.91	0.09
Final Sat.:	4761	792	1900	3686	1900	1900	1900	5187	1900	1900	5036	151
Capacity Analysis Module:												
Vol/Sat:	0.12	0.12	0.09	0.01	0.09	0.00	0.04	0.48	0.69	0.11	0.22	0.22
Crit Moves:	****				****				****	****		
Green/Cycle:	0.12	0.20	0.20	0.01	0.09	0.00	0.11	0.59	0.71	0.11	0.59	0.59
Volume/Cap:	0.97	0.60	0.46	0.60	0.97	0.00	0.37	0.82	0.97	0.97	0.37	0.37
Uniform Del:	78.6	65.5	63.5	88.3	81.7	0.0	74.6	29.5	24.3	79.8	19.3	19.3
IncremntDel:	27.4	0.9	0.9	18.8	60.4	0.0	1.1	1.9	18.1	54.0	0.1	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	106.0	66.5	64.4	107.1	142	0.0	75.7	31.4	42.4	133.8	19.4	19.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	106.0	66.5	64.4	107.1	142	0.0	75.7	31.4	42.4	133.8	19.4	19.4
LOS by Move:	F	E	E	F	F	A	E	C	D	F	B	B
HCM2k95thQ:	567	426	318	68	450	0	162	1268	2179	395	400	400

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Note: Queue reported is the distance per lane in feet.

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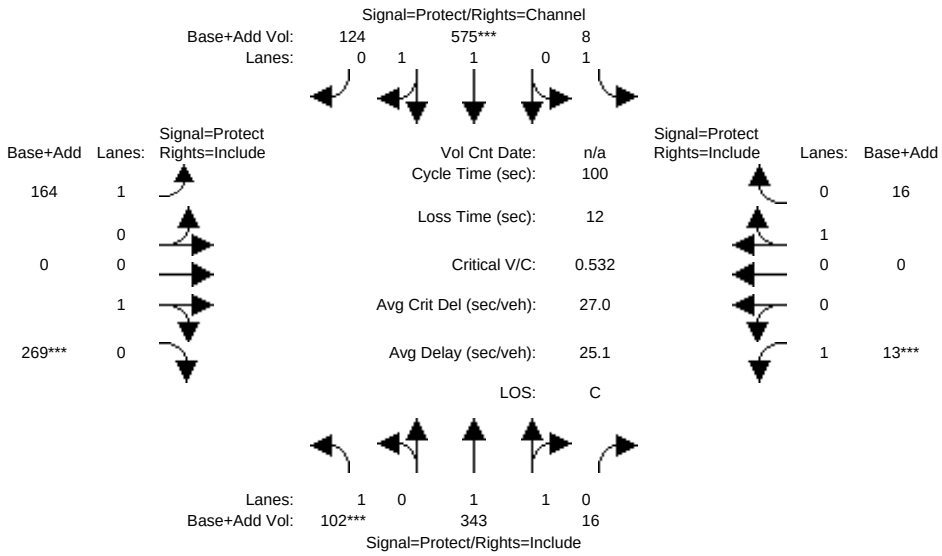
Appendix F – Level of Service Worksheets: Background plus Project Conditions

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background plus Project AM

Intersection #1: South Main Street/Cedar Way/Project Driveway



Street Name:	S Main Street						Cedar Way/Project Driveway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	102	330	0	0	511	124	164	0	269	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	102	330	0	0	511	124	164	0	269	0	0	0
Added Vol:	0	13	16	8	64	0	0	0	0	13	0	16
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	102	343	16	8	575	124	164	0	269	13	0	16
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.96	0.96	0.96	0.87	0.87	0.87	1.00	1.00	1.00
PHF Volume:	111	373	17	8	599	129	189	0	309	13	0	16
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	111	373	17	8	599	129	189	0	309	13	0	16
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	111	373	17	8	599	129	189	0	309	13	0	16
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.92	0.92	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.91	0.09	1.00	1.64	0.36	1.00	0.00	1.00	1.00	0.00	1.00
Final Sat.:	1805	3425	160	1805	2888	623	1805	0	1610	1805	0	1607
Capacity Analysis Module:												
Vol/Sat:	0.06	0.11	0.11	0.00	0.21	0.21	0.10	0.00	0.19	0.01	0.00	0.01
Crit Moves:	****				****				****	****		
Green/Cycle:	0.12	0.48	0.48	0.02	0.39	0.39	0.34	0.00	0.36	0.01	0.00	0.01
Volume/Cap:	0.53	0.22	0.22	0.22	0.53	0.53	0.31	0.00	0.53	0.53	0.00	0.74
Uniform Del:	41.7	14.9	14.9	48.2	23.5	23.5	24.2	0.0	25.3	49.0	0.0	49.1
IncremntDel:	2.6	0.1	0.1	3.1	0.4	0.4	0.3	0.0	0.9	20.7	0.0	80.8
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Delay/Veh:	44.3	15.0	15.0	51.3	23.9	23.9	24.5	0.0	26.2	69.7	0.0	129.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	44.3	15.0	15.0	51.3	23.9	23.9	24.5	0.0	26.2	69.7	0.0	129.9
LOS by Move:	D	B	B	D	C	C	C	A	C	E	A	F
HCM2k95thQ:	129	139	139	21	346	345	169	0	298	46	0	63

Note: Queue reported is the distance per lane in feet.

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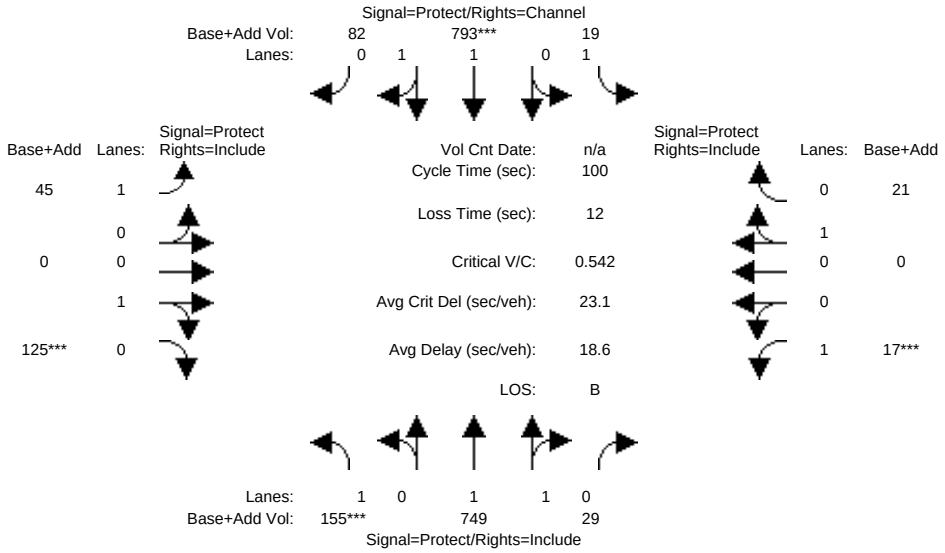
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background plus Project PM

Intersection #1: South Main Street/Cedar Way/Project Driveway



Street Name:	S Main Street						Cedar Way/Project Driveway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	155	692	0	5	763	82	45	0	125	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	155	692	0	5	763	82	45	0	125	0	0	0
Added Vol:	0	57	29	14	30	0	0	0	0	17	0	21
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	155	749	29	19	793	82	45	0	125	17	0	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.86	0.86	0.86	0.89	0.89	0.89	0.85	0.85	0.85	1.00	1.00	1.00
PHF Volume:	180	871	34	21	891	92	53	0	147	17	0	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	180	871	34	21	891	92	53	0	147	17	0	21
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	180	871	34	21	891	92	53	0	147	17	0	21
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.94	0.93	0.95	1.00	0.85	0.95	1.00	0.85
Lanes:	1.00	1.93	0.07	1.00	1.81	0.19	1.00	0.00	1.00	1.00	0.00	1.00
Final Sat.:	1805	3454	134	1805	3225	333	1805	0	1612	1805	0	1610
Capacity Analysis Module:												
Vol/Sat:	0.10	0.25	0.25	0.01	0.28	0.28	0.03	0.00	0.09	0.01	0.00	0.01
Crit Moves:	****				****				****	****		
Green/Cycle:	0.18	0.66	0.66	0.03	0.51	0.51	0.13	0.00	0.17	0.02	0.00	0.02
Volume/Cap:	0.54	0.38	0.38	0.38	0.54	0.54	0.23	0.00	0.54	0.54	0.00	0.75
Uniform Del:	37.0	7.6	7.6	47.5	16.6	16.6	39.1	0.0	38.1	48.7	0.0	48.9
IncremntDel:	1.8	0.1	0.1	4.3	0.3	0.3	0.5	0.0	2.2	17.9	0.0	72.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Delay/Veh:	38.8	7.7	7.7	51.8	16.9	16.9	39.6	0.0	40.3	66.6	0.0	120.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.8	7.7	7.7	51.8	16.9	16.9	39.6	0.0	40.3	66.6	0.0	120.9
LOS by Move:	D	A	A	D	B	B	D	A	D	E	A	F
HCM2k95thQ:	194	248	247	46	398	397	66	0	190	53	0	74

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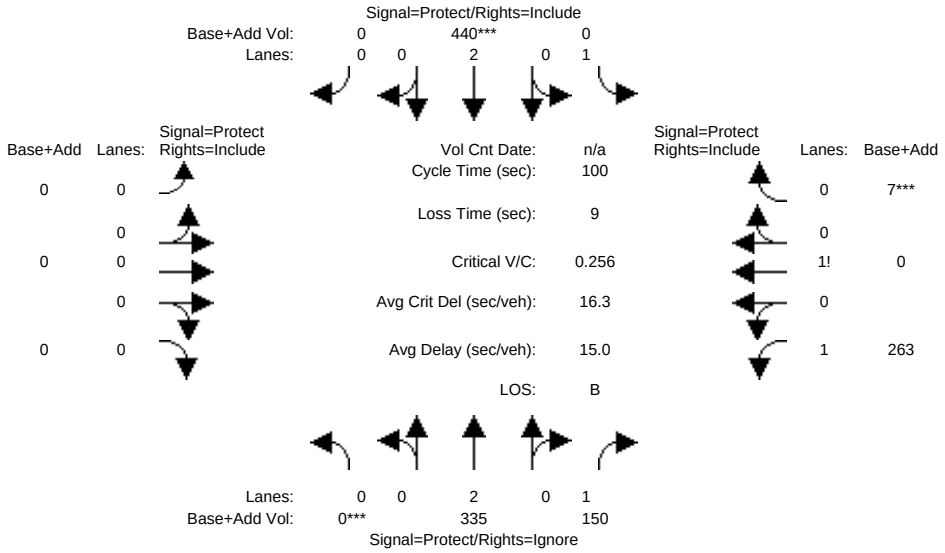
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background plus Project AM

Intersection #2: South Main Street/South Abel Street



Street Name:	South Main Street						South Abel Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	321	136	0	400	0	0	0	0	231	0	7
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	321	136	0	400	0	0	0	0	231	0	7
Added Vol:	0	14	14	0	40	0	0	0	0	32	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	335	150	0	440	0	0	0	0	263	0	7
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.87	0.87	0.00	0.89	0.89	0.89	1.00	1.00	1.00	0.80	0.80	0.80
PHF Volume:	0	385	0	0	494	0	0	0	0	329	0	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	385	0	0	494	0	0	0	0	329	0	9
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	385	0	0	494	0	0	0	0	329	0	9
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.95
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	0.00	0.00	0.00	1.95	0.00	0.05
Final Sat.:	0	3610	1900	1900	3610	0	0	0	0	3519	0	91
Capacity Analysis Module:												
Vol/Sat:	0.00	0.11	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.09	0.00	0.10
Crit Moves:	****				****							****
Green/Cycle:	0.00	0.54	0.00	0.00	0.54	0.00	0.00	0.00	0.00	0.37	0.00	0.37
Volume/Cap:	0.00	0.20	0.00	0.00	0.26	0.00	0.00	0.00	0.00	0.25	0.00	0.26
Uniform Del:	0.0	12.1	0.0	0.0	12.5	0.0	0.0	0.0	0.0	21.6	0.0	21.6
IncremntDel:	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	12.1	0.0	0.0	12.6	0.0	0.0	0.0	0.0	21.7	0.0	21.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	12.1	0.0	0.0	12.6	0.0	0.0	0.0	0.0	21.7	0.0	21.7
LOS by Move:	A	B	A	A	B	A	A	A	A	C	A	C
HCM2k95thQ:	0	127	0	0	167	0	0	0	0	142	0	146

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Level Of Service Computation Report
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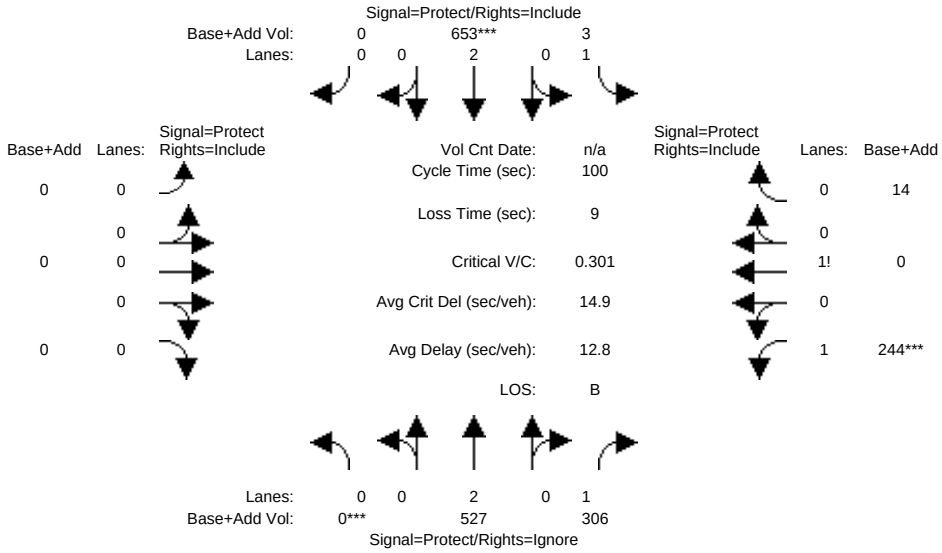
Intersection #2: South Main Street/South Abel Street



Street Name:	South Main Street						South Abel Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	0	484	271	3	627	0	0	0	0	225	0	14
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	484	271	3	627	0	0	0	0	225	0	14
Added Vol:	0	43	35	0	26	0	0	0	0	19	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	527	306	3	653	0	0	0	0	244	0	14
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.00	0.97	0.97	0.97	1.00	1.00	1.00	0.82	0.82	0.82
PHF Volume:	0	567	0	3	673	0	0	0	0	298	0	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	567	0	3	673	0	0	0	0	298	0	17
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	567	0	3	673	0	0	0	0	298	0	17
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.95
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	0.00	0.00	0.00	1.90	0.00	0.10
Final Sat.:	0	3610	1900	1805	3610	0	0	0	0	3415	0	185
Capacity Analysis Module:												
Vol/Sat:	0.00	0.16	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.09	0.00	0.09
Crit Moves:	****				****					****		
Green/Cycle:	0.00	0.61	0.00	0.01	0.62	0.00	0.00	0.00	0.00	0.29	0.00	0.29
Volume/Cap:	0.00	0.26	0.00	0.26	0.30	0.00	0.00	0.00	0.00	0.30	0.00	0.32
Uniform Del:	0.0	8.9	0.0	49.4	8.9	0.0	0.0	0.0	0.0	27.6	0.0	27.8
IncremntDel:	0.0	0.1	0.0	10.9	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	0.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	0.0	8.9	0.0	60.3	8.9	0.0	0.0	0.0	0.0	27.8	0.0	28.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	8.9	0.0	60.3	8.9	0.0	0.0	0.0	0.0	27.8	0.0	28.0
LOS by Move:	A	A	A	E	A	A	A	A	A	C	A	C
HCM2k95thQ:	0	164	0	15	196	0	0	0	0	152	0	161

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Level Of Service Computation Report
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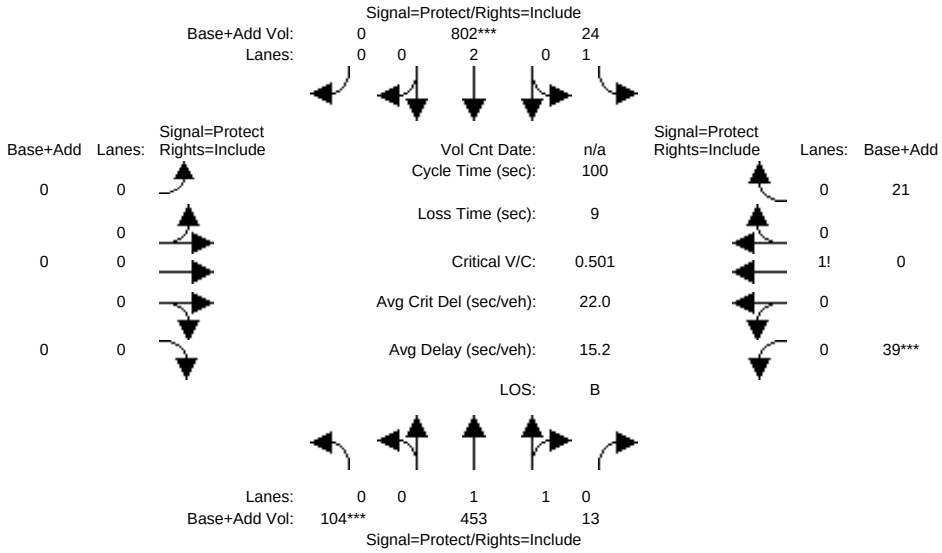
Background plus Project AM

Intersection #3: South Main Street / Mihalakis Dr



Street Name:	South Main Street						Mihalakis Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	104	424	13	24	725	0	0	0	0	39	0	21
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	104	424	13	24	725	0	0	0	0	39	0	21
Added Vol:	0	29	0	0	77	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	104	453	13	24	802	0	0	0	0	39	0	21
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.88	0.88	0.88	1.00	1.00	1.00	0.88	0.88	0.88
PHF Volume:	107	467	13	27	911	0	0	0	0	44	0	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	107	467	13	27	911	0	0	0	0	44	0	24
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	107	467	13	27	911	0	0	0	0	44	0	24
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.94	0.94	0.95	0.95	1.00	1.00	1.00	1.00	0.92	1.00	0.92
Lanes:	0.36	1.59	0.05	1.00	2.00	0.00	0.00	0.00	0.00	0.65	0.00	0.35
Final Sat.:	651	2834	81	1805	3610	0	0	0	0	1138	0	613
Capacity Analysis Module:												
Vol/Sat:	0.16	0.16	0.16	0.02	0.25	0.00	0.00	0.00	0.00	0.04	0.00	0.04
Crit Moves:	****				****					****		
Green/Cycle:	0.33	0.76	0.76	0.07	0.50	0.00	0.00	0.00	0.00	0.08	0.00	0.08
Volume/Cap:	0.50	0.22	0.22	0.22	0.50	0.00	0.00	0.00	0.00	0.50	0.00	0.50
Uniform Del:	27.0	3.4	3.4	43.9	16.5	0.0	0.0	0.0	0.0	44.3	0.0	44.3
IncremntDel:	0.3	0.0	0.0	0.9	0.2	0.0	0.0	0.0	0.0	2.9	0.0	2.9
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	27.3	3.4	3.4	44.8	16.7	0.0	0.0	0.0	0.0	47.2	0.0	47.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.3	3.4	3.4	44.8	16.7	0.0	0.0	0.0	0.0	47.2	0.0	47.2
LOS by Move:	C	A	A	D	B	A	A	A	A	D	A	D
HCM2k95thQ:	298	110	109	32	350	0	0	0	0	110	0	110

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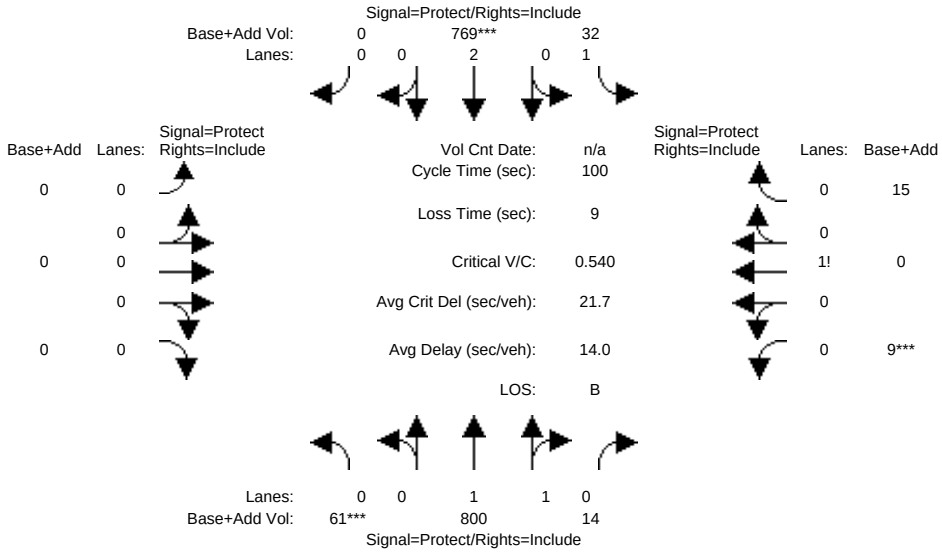
Background plus Project PM

Intersection #3: South Main Street / Mihalakis Dr



Street Name:	South Main Street						Mihalakis Drive					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	61	714	14	32	722	0	0	0	0	9	0	15
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	61	714	14	32	722	0	0	0	0	9	0	15
Added Vol:	0	86	0	0	47	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	61	800	14	32	769	0	0	0	0	9	0	15
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.96	0.96	0.96	1.00	1.00	1.00	0.75	0.75	0.75
PHF Volume:	63	825	14	33	801	0	0	0	0	12	0	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	63	825	14	33	801	0	0	0	0	12	0	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	63	825	14	33	801	0	0	0	0	12	0	20
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.94	0.95	0.95	1.00	1.00	1.00	1.00	0.90	1.00	0.89
Lanes:	0.14	1.83	0.03	1.00	2.00	0.00	0.00	0.00	0.00	0.37	0.00	0.63
Final Sat.:	250	3284	57	1805	3610	0	0	0	0	638	0	1063
Capacity Analysis Module:												
Vol/Sat:	0.25	0.25	0.25	0.02	0.22	0.00	0.00	0.00	0.00	0.02	0.00	0.02
Crit Moves:	****				****					****		
Green/Cycle:	0.46	0.82	0.82	0.06	0.41	0.00	0.00	0.00	0.00	0.03	0.00	0.03
Volume/Cap:	0.54	0.31	0.31	0.31	0.54	0.00	0.00	0.00	0.00	0.54	0.00	0.54
Uniform Del:	19.1	2.3	2.3	45.0	22.3	0.0	0.0	0.0	0.0	47.5	0.0	47.5
IncremntDel:	0.4	0.1	0.1	1.6	0.4	0.0	0.0	0.0	0.0	9.7	0.0	9.7
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Delay/Veh:	19.5	2.3	2.3	46.6	22.7	0.0	0.0	0.0	0.0	57.2	0.0	57.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	19.5	2.3	2.3	46.6	22.7	0.0	0.0	0.0	0.0	57.2	0.0	57.2
LOS by Move:	B	A	A	D	C	A	A	A	A	E	A	E
HCM2k95thQ:	388	147	147	40	351	0	0	0	0	74	0	73

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Note: Queue reported is the distance per lane in feet.

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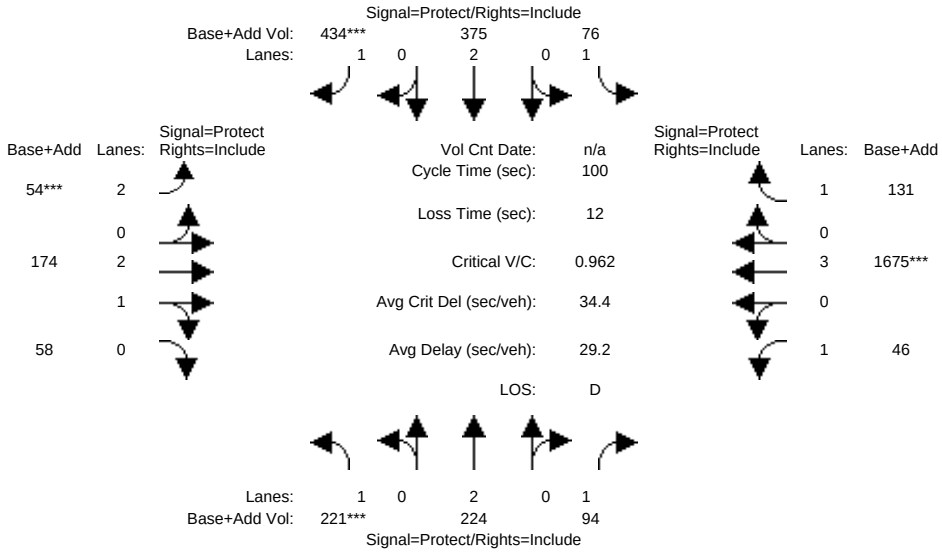
Level Of Service Computation Report
1994 HCM Operations (Future Volume Alternative)
Background plus Project AM

Intersection #4: Great Mall and Abel



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	191	220	47	70	374	434	54	136	49	46	1517	107
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	191	220	47	70	374	434	54	136	49	46	1517	107
Added Vol:	30	4	47	6	1	0	0	38	9	0	158	24
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	221	224	94	76	375	434	54	174	58	46	1675	131
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.81	0.81	0.81	0.93	0.93	0.93	0.89	0.89	0.89	0.83	0.83	0.83
PHF Volume:	273	277	116	82	403	467	61	196	65	55	2018	158
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	273	277	116	82	403	467	61	196	65	55	2018	158
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.00	1.00	1.05	1.00	1.03	1.10	1.10	1.00	1.10	1.00
FinalVolume:	273	290	116	82	423	467	62	215	72	55	2220	158
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.96	0.96	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	2.00	2.25	0.75	1.00	3.00	1.00
Final Sat.:	1805	3800	1615	1805	3800	1615	3610	4104	1368	1805	5700	1615
Capacity Analysis Module:												
Vol/Sat:	0.15	0.08	0.07	0.05	0.11	0.29	0.02	0.05	0.05	0.03	0.39	0.10
Crit Moves:	****					****	****				****	
Green/Cycle:	0.16	0.29	0.29	0.17	0.30	0.30	0.02	0.27	0.27	0.16	0.40	0.40
Volume/Cap:	0.96	0.27	0.25	0.27	0.37	0.96	0.96	0.20	0.20	0.20	0.96	0.24
Uniform Del:	31.8	20.9	20.8	27.4	20.9	26.2	37.3	21.6	21.6	27.9	22.1	14.9
IncremntDel:	31.8	0.0	0.1	0.1	0.1	23.2	72.2	0.0	0.0	0.0	8.4	0.0
Delay Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Delay/Veh:	58.8	17.8	17.7	23.4	17.9	45.4	103.9	18.3	18.3	23.8	27.1	12.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	58.8	17.8	17.7	23.4	17.9	45.4	103.9	18.3	18.3	23.8	27.1	12.7
DesignQueue:	264	117	93	76	169	383	34	79	79	52	533	106

Note: Queue reported is the distance per lane in feet.

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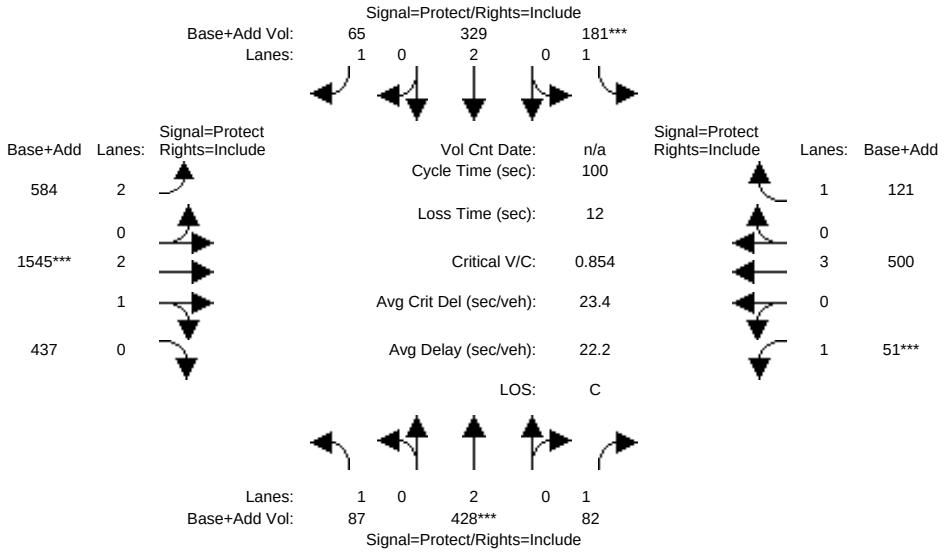
Level Of Service Computation Report
1994 HCM Operations (Future Volume Alternative)
Background plus Project PM

Intersection #4: Great Mall and Abel



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	68	425	60	158	324	65	584	1393	406	51	420	109
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	68	425	60	158	324	65	584	1393	406	51	420	109
Added Vol:	19	3	22	23	5	0	0	152	31	0	80	12
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	87	428	82	181	329	65	584	1545	437	51	500	121
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.68	0.68	0.68	0.82	0.82	0.82	0.94	0.94	0.94	0.78	0.78	0.78
PHF Volume:	128	629	121	221	401	79	621	1644	465	65	641	155
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	128	629	121	221	401	79	621	1644	465	65	641	155
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.00	1.00	1.05	1.00	1.03	1.10	1.10	1.00	1.10	1.00
FinalVolume:	128	661	121	221	421	79	640	1808	511	65	705	155
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.95	1.00	0.85	0.95	0.97	0.97	0.95	1.00	0.85
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	2.00	2.34	0.66	1.00	3.00	1.00
Final Sat.:	1805	3800	1615	1805	3800	1615	3610	4310	1219	1805	5700	1615
Capacity Analysis Module:												
Vol/Sat:	0.07	0.17	0.07	0.12	0.11	0.05	0.18	0.42	0.42	0.04	0.12	0.10
Crit Moves:		****		****				****		****		
Green/Cycle:	0.14	0.20	0.20	0.14	0.21	0.21	0.31	0.49	0.49	0.04	0.22	0.22
Volume/Cap:	0.52	0.85	0.37	0.85	0.52	0.23	0.56	0.85	0.85	0.85	0.56	0.44
Uniform Del:	30.6	29.2	26.1	31.8	26.6	24.8	21.7	17.0	17.0	36.2	26.4	25.6
IncremntDel:	1.7	6.5	0.3	16.0	0.5	0.1	0.5	2.1	2.1	38.1	0.5	0.6
Delay Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Delay/Veh:	27.7	31.3	22.5	43.0	23.1	21.2	19.0	16.5	16.5	68.8	22.9	22.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.7	31.3	22.5	43.0	23.1	21.2	19.0	16.5	16.5	68.8	22.9	22.4
DesignQueue:	125	304	108	215	189	70	253	478	478	70	209	137

Note: Queue reported is the distance per lane in feet.

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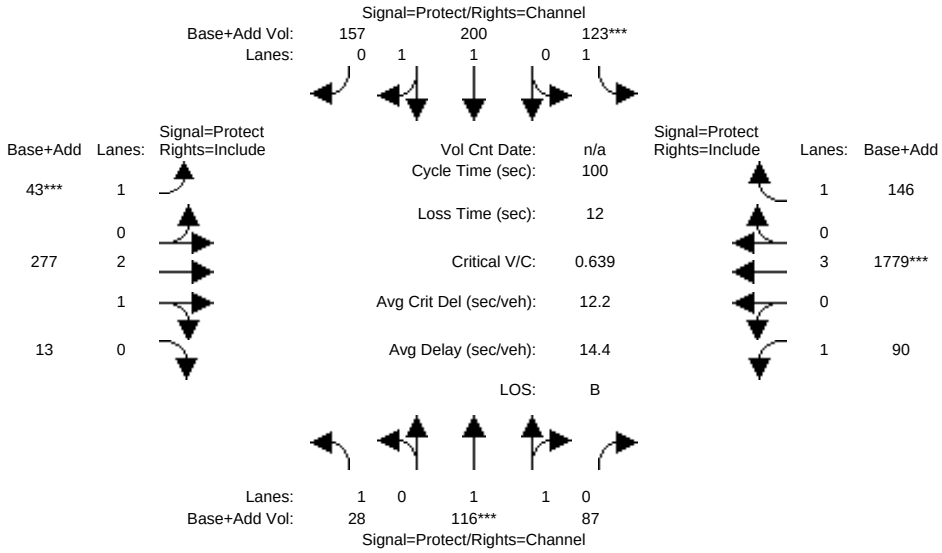
Level Of Service Computation Report
1994 HCM Operations (Future Volume Alternative)
Background plus Project AM

Intersection #5: Great Mall & South Main



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	11	113	53	118	198	157	40	194	9	72	1614	124
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	11	113	53	118	198	157	40	194	9	72	1614	124
Added Vol:	17	3	34	5	2	0	3	83	4	18	165	22
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	28	116	87	123	200	157	43	277	13	90	1779	146
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.76	0.76	0.76	0.90	0.90	0.90	0.78	0.78	0.78	0.91	0.91	0.91
PHF Volume:	37	153	114	137	222	174	55	355	17	99	1955	160
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	37	153	114	137	222	174	55	355	17	99	1955	160
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.10	1.10	1.00	1.10	1.00
FinalVolume:	37	160	120	137	233	183	55	391	18	99	2150	160
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.93	0.93	0.95	0.99	0.99	0.95	1.00	0.85
Lanes:	1.00	1.14	0.86	1.00	1.12	0.88	1.00	2.87	0.13	1.00	3.00	1.00
Final Sat.:	1805	2041	1531	1805	1980	1554	1805	5390	253	1805	5700	1615
Capacity Analysis Module:												
Vol/Sat:	0.02	0.08	0.08	0.08	0.12	0.12	0.03	0.07	0.07	0.05	0.38	0.10
Crit Moves:		****		****			****				****	
Green/Cycle:	0.04	0.12	0.12	0.12	0.21	0.21	0.05	0.36	0.36	0.27	0.59	0.59
Volume/Cap:	0.57	0.64	0.64	0.64	0.57	0.57	0.64	0.20	0.20	0.20	0.64	0.17
Uniform Del:	36.1	31.7	31.7	31.9	27.2	27.2	35.5	16.6	16.6	21.1	10.2	7.1
IncremntDel:	8.1	2.2	2.2	4.3	0.8	0.8	9.7	0.0	0.0	0.0	0.3	0.0
Delay Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Delay/Veh:	38.8	29.1	29.1	31.5	23.9	23.9	39.9	14.1	14.1	18.0	9.0	6.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.8	29.1	29.1	31.5	23.9	23.9	39.9	14.1	14.1	18.0	9.0	6.0
DesignQueue:	40	139	139	136	188	188	59	98	98	81	354	74

Note: Queue reported is the distance per lane in feet.

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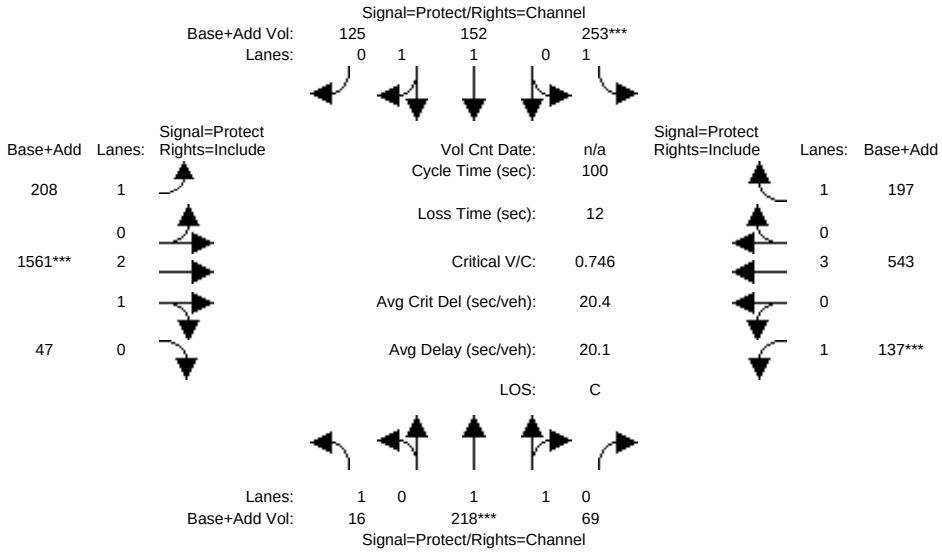
Level Of Service Computation Report
1994 HCM Operations (Future Volume Alternative)
Background plus Project PM

Intersection #5: Great Mall & South Main



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	8	216	46	232	145	125	206	1381	31	62	459	186
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	216	46	232	145	125	206	1381	31	62	459	186
Added Vol:	8	2	23	21	7	0	2	180	16	75	84	11
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	16	218	69	253	152	125	208	1561	47	137	543	197
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.87	0.87	0.87	0.95	0.95	0.95	0.97	0.97	0.97
PHF Volume:	18	240	76	291	175	144	219	1643	49	141	560	203
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	18	240	76	291	175	144	219	1643	49	141	560	203
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.05	1.05	1.00	1.05	1.05	1.00	1.10	1.10	1.00	1.10	1.00
FinalVolume:	18	252	80	291	183	151	219	1807	54	141	616	203
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.96	0.96	0.95	0.93	0.93	0.95	1.00	1.00	0.95	1.00	0.84
Lanes:	1.00	1.52	0.48	1.00	1.10	0.90	1.00	2.91	0.09	1.00	3.00	1.00
Final Sat.:	1805	2771	877	1805	1939	1595	1805	5533	167	1805	5700	1596
Capacity Analysis Module:												
Vol/Sat:	0.01	0.09	0.09	0.16	0.09	0.09	0.12	0.33	0.33	0.08	0.11	0.13
Crit Moves:		****		****				****		****		
Green/Cycle:	0.03	0.12	0.12	0.22	0.31	0.31	0.26	0.44	0.44	0.10	0.28	0.28
Volume/Cap:	0.31	0.75	0.75	0.75	0.31	0.31	0.46	0.75	0.75	0.75	0.39	0.46
Uniform Del:	36.0	32.2	32.2	27.9	20.2	20.2	23.4	17.8	17.8	33.0	22.2	22.7
IncremntDel:	1.0	4.7	4.7	5.3	0.1	0.1	0.5	0.9	0.9	10.0	0.1	0.5
Delay Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Delay/Veh:	31.6	32.1	32.1	28.9	17.2	17.2	20.4	16.1	16.1	38.0	19.0	19.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.6	32.1	32.1	28.9	17.2	17.2	20.4	16.1	16.1	38.0	19.0	19.9
DesignQueue:	19	165	165	262	131	131	183	417	417	143	169	167

Note: Queue reported is the distance per lane in feet.

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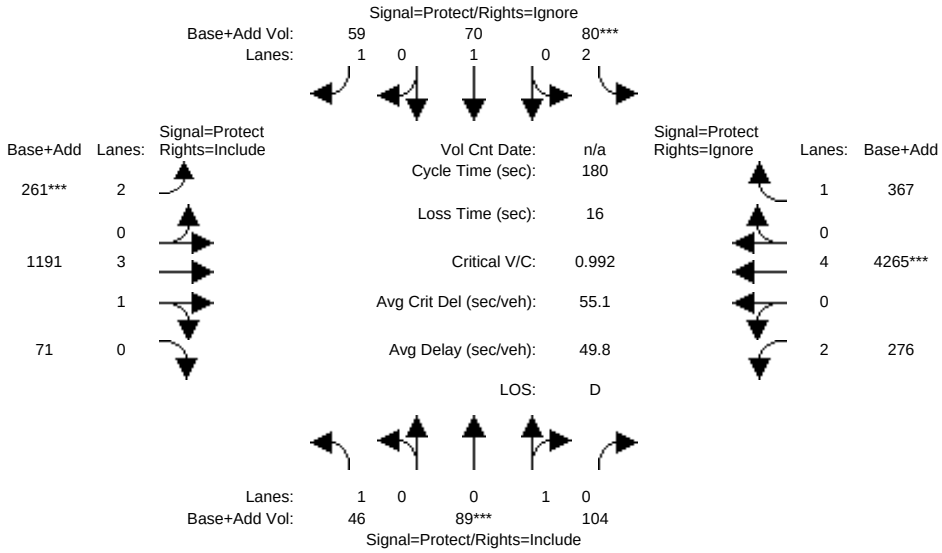
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background plus Project AM

Intersection #6: O'Toole Ave/ McCarthy Blvd & Montague Expr



Street Name:	O'Toole Avenue/McCarthy Boulevard						Montague Expressway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	46	89	104	80	70	59	261	1162	71	276	4153	367
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	46	89	104	80	70	59	261	1162	71	276	4153	367
Added Vol:	0	0	0	0	0	0	0	29	0	0	112	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	46	89	104	80	70	59	261	1191	71	276	4265	367
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.65	0.65	0.65	0.89	0.89	0.00	0.88	0.88	0.88	0.96	0.96	0.00
PHF Volume:	71	137	160	90	79	0	297	1353	81	288	4443	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	71	137	160	90	79	0	297	1353	81	288	4443	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	71	137	160	90	79	0	297	1353	81	288	4443	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.97	1.00	1.00	0.97	0.91	0.91	0.97	0.91	1.00
Lanes:	1.00	0.46	0.54	2.00	1.00	1.00	2.00	3.77	0.23	2.00	4.00	1.00
Final Sat.:	1900	876	1024	3686	1900	1900	3686	6527	389	3686	6916	1900
Capacity Analysis Module:												
Vol/Sat:	0.04	0.16	0.16	0.02	0.04	0.00	0.08	0.21	0.21	0.08	0.64	0.00
Crit Moves:		****		****			****				****	
Green/Cycle:	0.09	0.16	0.16	0.02	0.10	0.00	0.08	0.53	0.53	0.20	0.65	0.00
Volume/Cap:	0.43	0.99	0.99	0.99	0.43	0.00	0.99	0.39	0.39	0.39	0.99	0.00
Uniform Del:	78.0	75.7	75.7	87.8	76.7	0.0	82.6	25.1	25.1	62.6	31.2	0.0
IncremntDel:	1.8	49.6	49.6	91.6	1.6	0.0	49.6	0.1	0.1	0.3	11.6	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	79.9	125	125.3	179.4	78.4	0.0	132.3	25.2	25.2	62.9	42.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	79.9	125	125.3	179.4	78.4	0.0	132.3	25.2	25.2	62.9	42.8	0.0
LOS by Move:	E	F	F	F	E	A	F	C	C	E	D	A
HCM2k95thQ:	161	701	701	184	174	0	432	444	444	269	2171	0

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Note: Queue reported is the distance per lane in feet.

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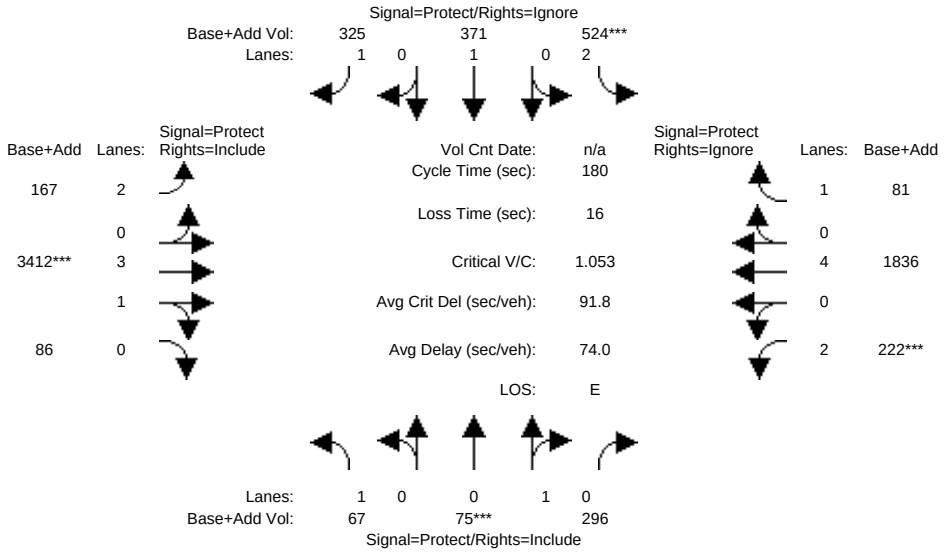
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background plus Project PM

Intersection #6: O'Toole Ave/ McCarthy Blvd & Montague Expr



Street Name:	O'Toole Avenue/McCarthy Boulevard						Montague Expressway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	67	75	296	524	371	325	167	3302	86	222	1777	81
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	67	75	296	524	371	325	167	3302	86	222	1777	81
Added Vol:	0	0	0	0	0	0	0	110	0	0	59	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	67	75	296	524	371	325	167	3412	86	222	1836	81
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.91	0.91	0.00	0.96	0.96	0.96	0.85	0.85	0.00
PHF Volume:	71	79	312	576	408	0	174	3554	90	261	2160	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	71	79	312	576	408	0	174	3554	90	261	2160	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	71	79	312	576	408	0	174	3554	90	261	2160	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.97	1.00	1.00	0.97	0.91	0.91	0.97	0.91	1.00
Lanes:	1.00	0.20	0.80	2.00	1.00	1.00	2.00	3.90	0.10	2.00	4.00	1.00
Final Sat.:	1900	384	1516	3686	1900	1900	3686	6746	170	3686	6916	1900
Capacity Analysis Module:												
Vol/Sat:	0.04	0.21	0.21	0.16	0.21	0.00	0.05	0.53	0.53	0.07	0.31	0.00
Crit Moves:		****		****				****		****		
Green/Cycle:	0.05	0.20	0.20	0.15	0.29	0.00	0.07	0.50	0.50	0.07	0.49	0.00
Volume/Cap:	0.73	1.05	1.05	1.05	0.73	0.00	0.63	1.05	1.05	1.05	0.63	0.00
Uniform Del:	84.2	72.4	72.4	76.6	57.3	0.0	80.9	45.0	45.0	83.9	33.6	0.0
IncremntDel:	24.9	61.4	61.4	53.2	5.0	0.0	4.8	31.7	31.7	71.8	0.4	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Delay/Veh:	109.1	134	133.8	129.9	62.3	0.0	85.7	76.6	76.6	155.7	34.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	109.1	134	133.8	129.9	62.3	0.0	85.7	76.6	76.6	155.7	34.0	0.0
LOS by Move:	F	F	F	F	E	A	F	E	E	F	C	A
HCM2k95thQ:	204	907	907	736	702	0	223	1966	1966	411	782	0

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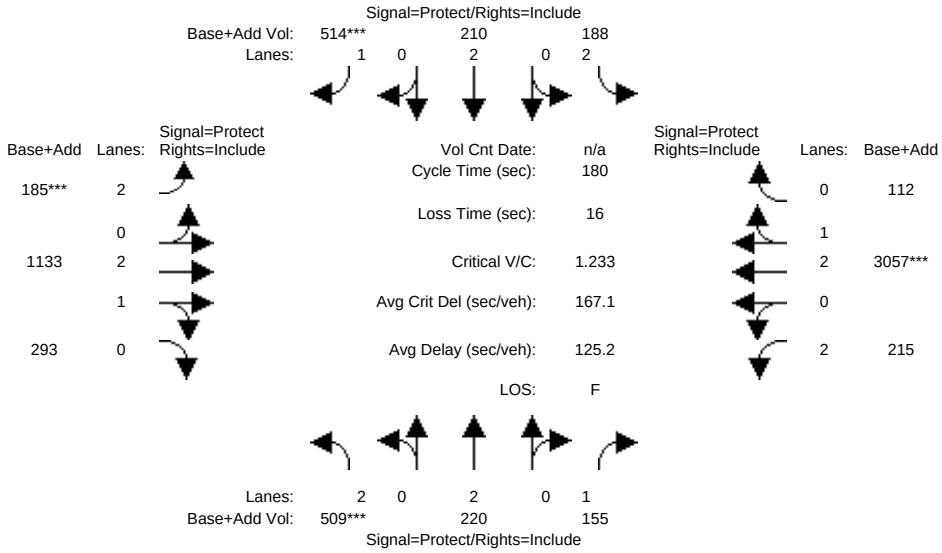
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background plus Project AM

Intersection #7: S Main St/Oakland Road & Montague Expr



Street Name:	S Main Street/Oakland Road						Montague Expressway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	509	215	141	177	193	465	170	1091	293	157	2881	104
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	509	215	141	177	193	465	170	1091	293	157	2881	104
Added Vol:	0	5	14	11	17	49	15	42	0	58	176	8
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	509	220	155	188	210	514	185	1133	293	215	3057	112
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.90	0.90	0.90	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	547	237	167	209	233	571	189	1156	299	219	3119	114
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	547	237	167	209	233	571	189	1156	299	219	3119	114
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	547	237	167	209	233	571	189	1156	299	219	3119	114
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.91	0.91	0.97	0.91	0.91
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.38	0.62	2.00	2.89	0.11
Final Sat.:	3686	3610	1900	3686	3610	1900	3686	4121	1066	3686	5004	183
Capacity Analysis Module:												
Vol/Sat:	0.15	0.07	0.09	0.06	0.06	0.30	0.05	0.28	0.28	0.06	0.62	0.62
Crit Moves:	****					****	****				****	
Green/Cycle:	0.12	0.22	0.22	0.14	0.24	0.24	0.04	0.45	0.45	0.10	0.51	0.51
Volume/Cap:	1.23	0.30	0.40	0.40	0.27	1.23	1.23	0.62	0.62	0.62	1.23	1.23
Uniform Del:	79.2	58.4	59.8	70.1	55.0	68.1	86.3	37.7	37.7	78.2	44.5	44.5
IncremntDel:	123.3	0.2	0.6	0.5	0.2	122.6	148.8	0.5	0.5	3.4	109	108.5
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	202.4	58.6	60.5	70.6	55.2	190.7	235.1	38.2	38.2	81.7	153	153.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	202.4	58.6	60.5	70.6	55.2	190.7	235.1	38.2	38.2	81.7	153	153.0
LOS by Move:	F	E	E	E	E	F	F	D	D	F	F	F
HCM2k95thQ:	803	217	293	215	207	1426	359	735	735	262	2760	2760

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Note: Queue reported is the distance per lane in feet.

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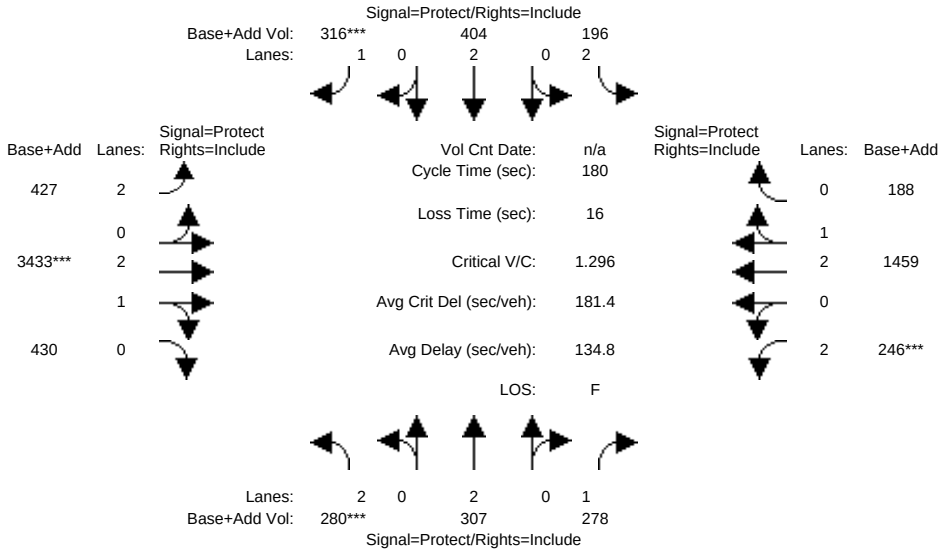
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background plus Project PM

Intersection #7: S Main St/Oakland Road & Montague Expr



Street Name:	S Main Street/Oakland Road						Montague Expressway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	280	290	222	187	394	287	375	3264	430	216	1370	171
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	280	290	222	187	394	287	375	3264	430	216	1370	171
Added Vol:	0	17	56	9	10	29	52	169	0	30	89	17
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	280	307	278	196	404	316	427	3433	430	246	1459	188
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.84	0.84	0.84	0.90	0.90	0.90	0.94	0.94	0.94
PHF Volume:	311	341	309	233	481	376	474	3814	478	262	1552	200
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	311	341	309	233	481	376	474	3814	478	262	1552	200
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	311	341	309	233	481	376	474	3814	478	262	1552	200
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.91	0.91	0.97	0.91	0.91
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.67	0.33	2.00	2.66	0.34
Final Sat.:	3686	3610	1900	3686	3610	1900	3686	4610	577	3686	4595	592
Capacity Analysis Module:												
Vol/Sat:	0.08	0.09	0.16	0.06	0.13	0.20	0.13	0.83	0.83	0.07	0.34	0.34
Crit Moves:	****					****		****		****		
Green/Cycle:	0.07	0.16	0.16	0.06	0.15	0.15	0.19	0.64	0.64	0.05	0.50	0.50
Volume/Cap:	1.30	0.60	1.04	1.04	0.87	1.30	0.67	1.30	1.30	1.30	0.67	0.67
Uniform Del:	84.1	70.7	75.9	84.5	74.5	76.3	67.6	32.5	32.5	85.1	33.7	33.7
IncremntDel:	160.5	1.8	62.0	69.9	14.2	156.4	2.6	136	135.6	164.8	0.7	0.7
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	244.6	72.5	137.9	154.4	88.7	232.6	70.1	168	168.1	249.9	34.4	34.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	244.6	72.5	137.9	154.4	88.7	232.6	70.1	168	168.1	249.9	34.4	34.4
LOS by Move:	F	E	F	F	F	F	E	F	F	F	C	C
HCM2k95thQ:	539	360	749	374	563	1050	472	3827	3827	472	856	856

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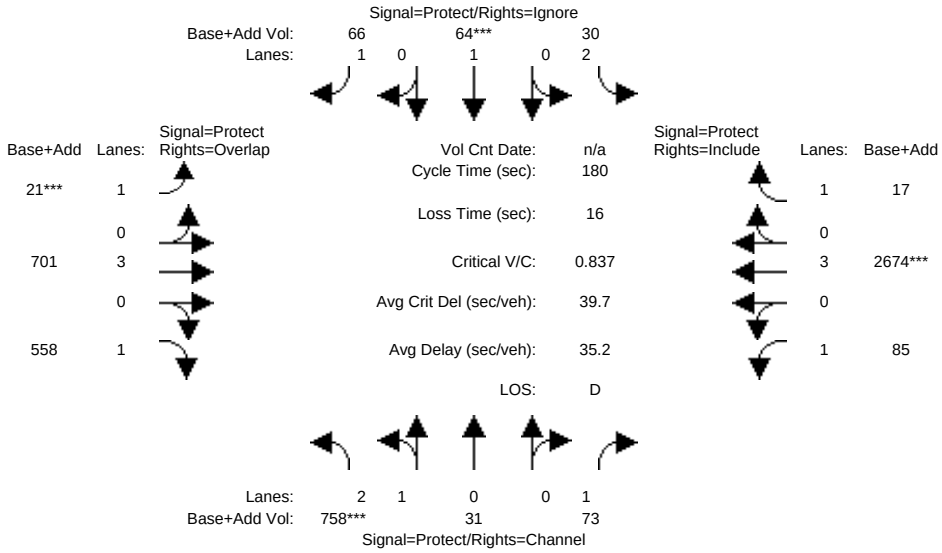
2000 HCM Operations (Future Volume Alternative)
Background plus Project AM

Intersection #8: McCandless DrZone Blvd & Montague Expr



Street Name:	Trade Zone Blvd/McCandless Dr						Montague Expressway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	727	20	58	12	41	37	15	656	541	63	2493	13
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	727	20	58	12	41	37	15	656	541	63	2493	13
Added Vol:	31	11	15	18	23	29	6	45	17	22	181	4
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	758	31	73	30	64	66	21	701	558	85	2674	17
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.00	0.88	0.88	0.88	0.93	0.93	0.93
PHF Volume:	842	34	81	33	71	0	24	797	634	91	2875	18
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	842	34	81	33	71	0	24	797	634	91	2875	18
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	842	34	81	33	71	0	24	797	634	91	2875	18
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.97	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Lanes:	2.89	0.11	1.00	2.00	1.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	5318	217	1900	3686	1900	1900	1900	5187	1900	1900	5187	1900
Capacity Analysis Module:												
Vol/Sat:	0.16	0.16	0.04	0.01	0.04	0.00	0.01	0.15	0.33	0.05	0.55	0.01
Crit Moves:	****				****		****				****	
Green/Cycle:	0.19	0.22	0.22	0.01	0.04	0.00	0.02	0.53	0.72	0.15	0.66	0.66
Volume/Cap:	0.84	0.72	0.19	0.72	0.84	0.00	0.84	0.29	0.46	0.33	0.84	0.01
Uniform Del:	70.3	64.8	57.0	88.5	85.3	0.0	88.4	23.3	10.5	69.0	23.0	10.4
IncremntDel:	6.0	2.0	0.2	41.3	48.5	0.0	100.9	0.1	0.2	0.7	1.9	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	76.3	66.9	57.2	129.9	134	0.0	189.4	23.4	10.8	69.7	25.0	10.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	76.3	66.9	57.2	129.9	134	0.0	189.4	23.4	10.8	69.7	25.0	10.4
LOS by Move:	E	E	E	F	F	A	F	C	B	E	C	B
HCM2k95thQ:	619	562	141	80	223	0	107	318	502	163	1265	13

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Note: Queue reported is the distance per lane in feet.

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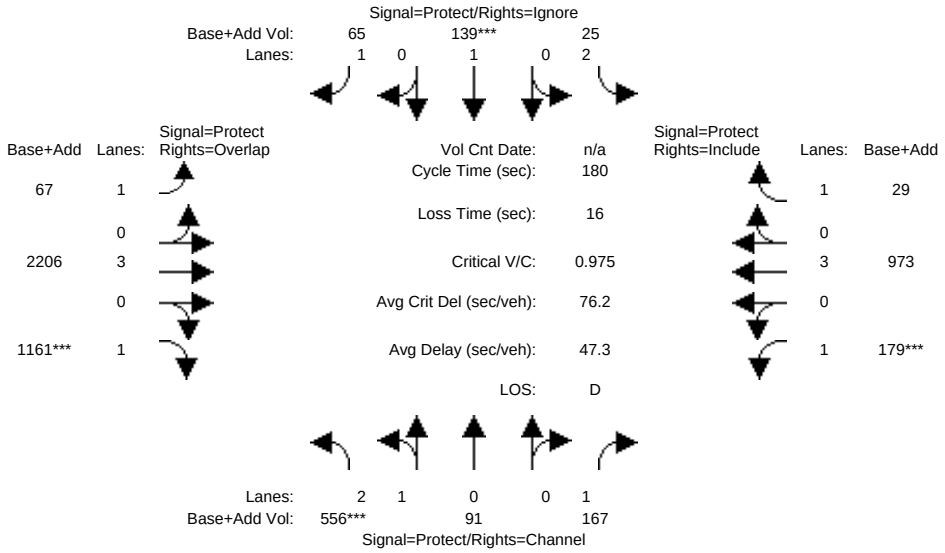
Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background plus Project PM

Intersection #8: McCandless DrZone Blvd & Montague Expr



Street Name:	Trade Zone Blvd/McCandless Dr						Montague Expressway					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	532	63	143	16	124	51	39	2033	1129	159	876	12
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	532	63	143	16	124	51	39	2033	1129	159	876	12
Added Vol:	24	28	24	9	15	14	28	173	32	20	97	17
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	556	91	167	25	139	65	67	2206	1161	179	973	29
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.84	0.84	0.00	0.88	0.88	0.88	0.88	0.88	0.88
PHF Volume:	579	95	174	30	165	0	76	2507	1319	203	1106	33
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	579	95	174	30	165	0	76	2507	1319	203	1106	33
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	579	95	174	30	165	0	76	2507	1319	203	1106	33
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.97	1.00	1.00	0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Lanes:	2.59	0.41	1.00	2.00	1.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	4771	781	1900	3686	1900	1900	1900	5187	1900	1900	5187	1900
Capacity Analysis Module:												
Vol/Sat:	0.12	0.12	0.09	0.01	0.09	0.00	0.04	0.48	0.69	0.11	0.21	0.02
Crit Moves:	****				****				****	****		
Green/Cycle:	0.12	0.20	0.20	0.01	0.09	0.00	0.11	0.59	0.71	0.11	0.59	0.59
Volume/Cap:	0.98	0.61	0.46	0.61	0.98	0.00	0.36	0.82	0.98	0.98	0.36	0.03
Uniform Del:	78.5	65.5	63.3	88.3	81.8	0.0	74.2	29.6	24.4	79.9	19.5	15.6
IncremntDel:	28.0	1.0	0.9	19.7	61.5	0.0	1.1	1.9	18.8	55.0	0.1	0.0
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	106.5	66.4	64.2	108.0	143	0.0	75.3	31.5	43.2	134.9	19.6	15.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	106.5	66.4	64.2	108.0	143	0.0	75.3	31.5	43.2	134.9	19.6	15.6
LOS by Move:	F	E	E	F	F	A	E	C	D	F	B	B
HCM2k95thQ:	574	431	318	68	451	0	161	1270	2207	396	391	29

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Note: Queue reported is the distance per lane in feet.

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ROSEN
GOLDBERG
DER &
LEWITZ, INC.
Acoustical and Audiovisual Consultants

1F-Exhibit 3

DRAFT #2 SITE NOISE ASSESSMENT:

Milpitas Senior Housing
South Main Senior Lifestyles Phase 1
1504-1620 South Main Street

Milpitas, CA

RGDL Project #: 13-014

PREPARED FOR:

South Main Senior Lifestyles, LLC
c/o Callahan Property Company
5674 Stoneridge Dr., Suite 212
Pleasanton, CA 94588

PREPARED BY:

Harold Goldberg, P.E.

DATE:

2 April 2014

1. Introduction

The proposed project is a 199 unit rental, congregate and assisted living residential project. The site is located west of South Main Street, east of the Union Pacific railroad tracks and north of an existing multifamily residential development and various commercial land uses. This project represents Phase I of a proposed two phase senior housing development. The second phase development would occur on the parcel directly north of the project site. Existing noise sources include traffic on South Main Street, freight train activity, aircraft, and activities at the adjacent residential and commercial uses. This study addresses the noise affecting the project site with respect to the requirements of the State of California Building Code, the City Milpitas General Plan and the U.S. Department of Housing and Urban Development's (HUD) noise guidelines.

2. Environmental Noise Fundamentals

Noise can be defined as unwanted sound. It is commonly measured with an instrument called a sound level meter. The sound level meter captures the sound with a microphone and converts it into a number called a sound level. Sound levels are expressed in units of decibels. To correlate the microphone signal to a level that corresponds to the way humans perceive noise, the A-weighting filter is used. A-weighting de-emphasizes low-frequency and very high-frequency sound in a manner similar to human hearing. The use of A-weighting is required by most local General Plans as well as federal and state noise regulations (e.g. Caltrans, EPA, OSHA and HUD). The abbreviation dBA is sometimes used when the A-weighted sound level is reported.

Because of the time-varying nature of environmental sound, there are many descriptors that are used to quantify the sound level. Although one individual descriptor alone does not fully describe a particular noise environment, taken together, they can more accurately represent the noise environment. The maximum instantaneous noise level (L_{max}) is often used to identify the loudness of a single event such as a car passby or airplane flyover. To express the average noise level the L_{eq} (equivalent noise level) is used. The L_{eq} can be measured over any length of time but is typically reported for periods of 15 minutes to 1 hour. The background noise level (or residual noise level) is the sound level during the quietest moments. It is usually generated by steady sources such as distant freeway traffic. It can be quantified with a descriptor called the L_{90} which is the sound level exceeded 90 percent of the time.

To quantify the noise level over a 24-hour period, the Day/Night Average Sound Level (DNL or L_{dn}) or Community Noise Equivalent Level (CNEL) is used. These descriptors are averages like the L_{eq} except they include a 10 dB penalty during nighttime hours (and a 5 dB penalty during evening hours in the CNEL) to account for peoples increased sensitivity during these hours. The CNEL and L_{dn} are typically less that one decibel from each other.

In environmental noise, a change in noise level of 3 dB is considered a just noticeable difference. A 5 dB change is clearly noticeable, but not dramatic. A 10 dB change is perceived as a halving or doubling in loudness.

3. Acoustical and Vibration Criteria

3.1. State of California

The 2010 State of California Building Code has a section on exterior sound transmission control that requires indoor noise levels in new multi-family housing and hotels be controlled to a DNL of 45 dBA if outdoor levels are in excess of a DNL of 60 dBA (2010 CBC 1207.11). Furthermore, if windows must be in the closed position to meet the requirement, then the building design must also specify a ventilation or air-conditioning system to provide a habitable interior environment. The ventilation system must not compromise the noise reduction provided by the façade.

The 2013 California Building Code that went into effect in January 2014 does not contain any exterior sound transmission control requirement for the first time since 1974. The reason stated by the California Department of Housing and Community Development (HCD) for not continuing the exterior sound transmission control requirement is that the regulations of federal, state and local agencies already cover this requirement. In fact, other regulations do not consistently address exterior sound transmission control and often fail to require that new multifamily housing and hotels be designed to meet any interior noise level requirement. As an example, the General Plans of many cities and counties in California recognize the need to control exterior noise intrusion and directly reference the State's indoor noise level requirement from 2010 yet few specify a noise standard of their own.

The requirement to control exterior sound transmission to meet a DNL of 45 dBA indoors has been part of the State Code for the past 40 years. HCD is now aware that it mistakenly omitted this requirement from the 2013 building code and is taking steps to reinstate the requirement as part of the current 18-month intervening code cycle review. Therefore, for the purposes of this report we are providing an analysis and recommendations to meet the exterior noise transmission control requirement of the 2010 Building code (CBC 1207.11).

The 2013 California Building Code retains the pre-2013 requirements for air-borne and structure-borne sound transmission control between dwelling units. Although this report does not address the project's compliance with these architectural acoustics requirements they are presented here for completeness. Specifically the code requires that:

- Walls, partitions and floor/ceiling assemblies separating dwelling units from each other or from public or service areas shall have a sound transmission class (STC) of not less than 50 (45 if field tested).
- Floor/ceiling assemblies between dwelling units or between a dwelling unit and a public or service area within the structure shall have an impact insulation class (IIC) rating of not less than 50 (45 if field tested).

3.2. City of Milpitas

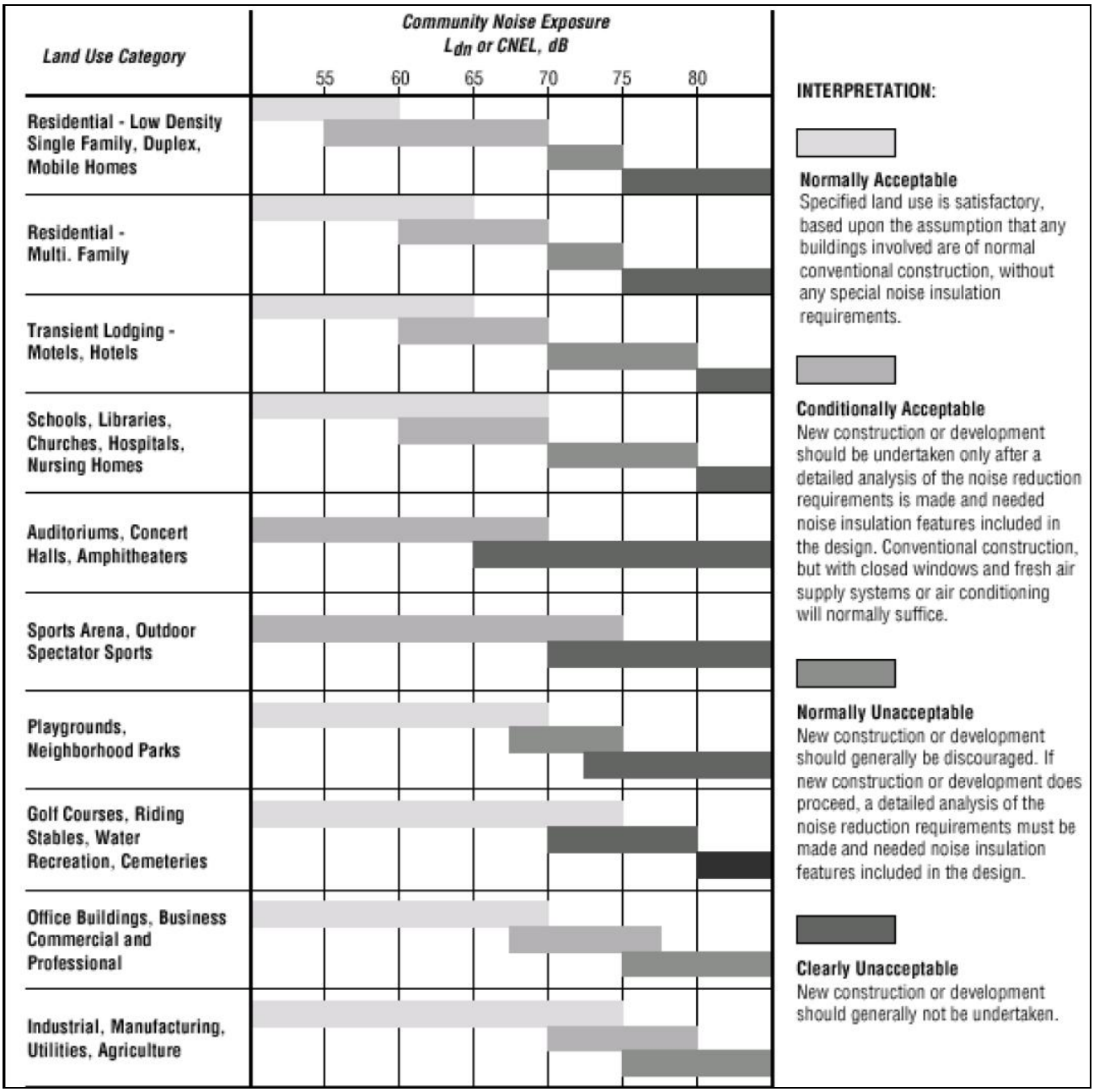
The Noise Element of the City of Milpitas' General Plan has policies to promote land uses that are compatible with the noise environment at a site. The City's land use compatibility guidelines are summarized in Figure 1.

The following General Plan Implementing Policies apply to this project:

6-I-4 *Where actual or projected rear yard and exterior common open space noise exposure exceeds the "normally acceptable" levels for new single-family and multifamily residential projects, use mitigation measures to reduce sound levels in those areas to acceptable levels.*

6-I-5 *All new residential development (single family and multifamily) and lodging facilities must have interior noise levels of 45 dB DNL or less. Mechanical ventilation will be required where use of windows for ventilation will result in higher than 45 dB DNL interior noise levels.*

Figure 1: City of Milpitas Noise Compatibility Standards (Figure 6-1 of Milpitas Noise Element)



3.3. U.S. Department of Housing and Urban Development (HUD)

The HUD Site Acceptability Standards are contained in 24CFR51 and are summarized below in Figure 3.

Table 1: HUD Site Acceptability Standards

	Day-night average sound level (L_{dn}) (in decibels)	Special approvals and requirements
Acceptable	Not exceeding 65 dB(1)	None.
Normally Unacceptable	Above 65 dB but not exceeding 75 dB	Special Approvals (2) Environmental Review (3). Attenuation (4).
Unacceptable	Above 75 dB	Special Approvals (2). Environmental Review (3). Attenuation (5).

Notes: (1) Acceptable threshold may be shifted to 70 dB in special circumstances pursuant to § 51.105(a).
(2) See § 51.104(b) for requirements.
(3) See § 51.104(b) for requirements.
(4) 5 dB additional attenuation required for sites above 65 dB but not exceeding 70 dB and 10 dB additional attenuation requiredfor sites above 70 dB but not exceeding 75 dB. (See § 51.104(a).)
(5) Attenuation measures to be submitted to the Assistant Secretary for CPD for approval on a case-by-case basis.

According to the HUD regulations, development in Normally Unacceptable Noise Zones require a minimum of 5 decibels additional sound attenuation for buildings having noise-sensitive uses if the L_{dn} is greater than 65 dBA but does not exceed 70 dBA, or a minimum of 10 dBA additional sound attenuation if the L_{dn} is greater than 70 dBA but does not exceed 75 dBA. Noise attenuation measures in Unacceptable Noise Zones require the approval of the Assistant Secretary for Community Planning and Development, or the Certifying Officer for activities subject to 24 CFR part 58.

HUD's regulations do not contain standards for interior noise levels. Rather a goal of DNL 45 dBA is set forth and the attenuation requirements are geared towards achieving that goal. It is assumed that with standard construction any building will provide sufficient attenuation so that if the exterior level is 65 dBA or less, the interior DNL will be 45 dBA or less.

3.4. Ground Vibration

Ground vibration generated by train passbys can propagate into nearby buildings and cause perceptible vibration in the floors and walls of residential units. This perceptible vibration can cause annoyance to the residents. Neither the City's General Plan nor the State's Noise Insulation Standards set

standards for acceptable vibration levels in residences. For this project we have considered information from the Federal Transit Administration[1] (FTA).

The FTA has identified vibration impact criteria for assessing new transit systems near existing homes. The FTA considers an impact to occur when the vibration velocity level inside a residence from frequent events (70 or more events per day) exceeds 72 VdB[2]. For infrequent events (fewer than 30 trains per day) the FTA impact criterion is 80 VdB. The FTA also provides Table 2 to help understand the human response to different levels of ground-borne vibration.

Table 2: Human Response to Different Levels of Ground-borne Vibration

Vibration Level	Human Response
65 VdB	Approximate threshold of perception for many humans.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible.
85 VdB	Vibration acceptable only if there are an infrequent number of events per day.

4. Noise and Vibration Environment

The major noise sources affecting the site are vehicular traffic on South Main Street, freight train passbys on the adjacent Union Pacific Railroad tracks and airplane flyovers. Noise from the auto repair shops to the south affect the adjacent portion of the site. There was also noise from construction activities at the residential projects across the railroad tracks to the east.

4.1. Noise and Vibration Measurements

Figure 2 shows the location of the noise and vibration measurements. Noise monitor LT-1 was located on a street light at the proposed setback of the project building from the Union Pacific Railroad tracks. This monitor operated for a total of seven days consisting of one 5-day period and one 2-day period. Noise monitor LT-2 was located on a tree at the proposed setback of the project building from South Main Street and operated a total of five days. The average DNL at LT-1 was 58 dBA. The average DNL at LT-2 was 69 dBA. Figure 3 and 4 are charts showing the diurnal variation in hourly noise levels as measured at the long term monitoring locations and the dates of the measurements

[1] *Transit Noise and Vibration Impact Assessment*, Federal Transit Administration, April 2006.
[2] VdB – The vibration velocity level expressed in decibel re one micro-inch per second.

One short-term (one hour and 40 minutes) noise measurement was conducted at location ST-1 which is at the property line of the project site adjacent to the auto repair shops to the south. Table 3 shows the results of the short-term noise measurement.

Ground vibration measurements were made at location V-1 at the setback of the project building from the Union Pacific Railroad tracks. Table 4 shows the noise and vibration levels of the railroad train passbys.

Figure 2: Noise and Vibration Measurement Locations

Figure 3: Long-Term Noise Measurement Along Railroad Tracks: LT-1

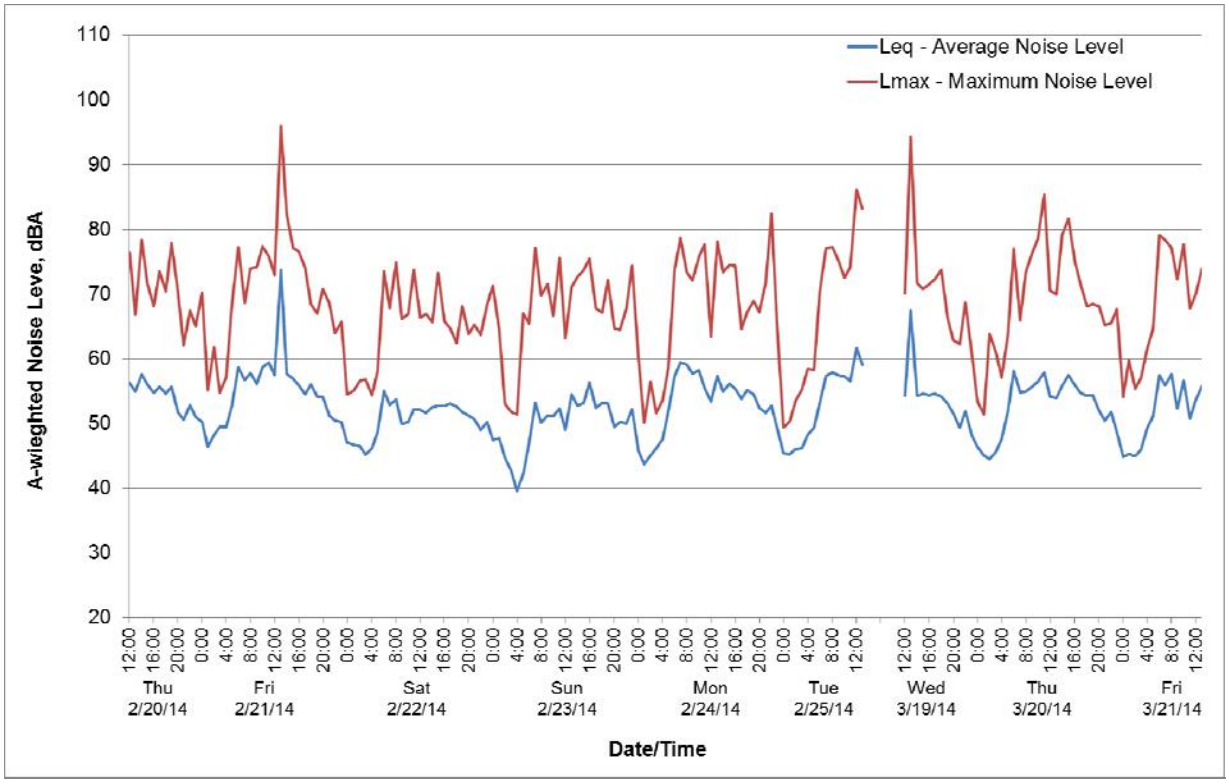


Figure 4: Long-Term Noise Measurement along South Main Street: LT-2

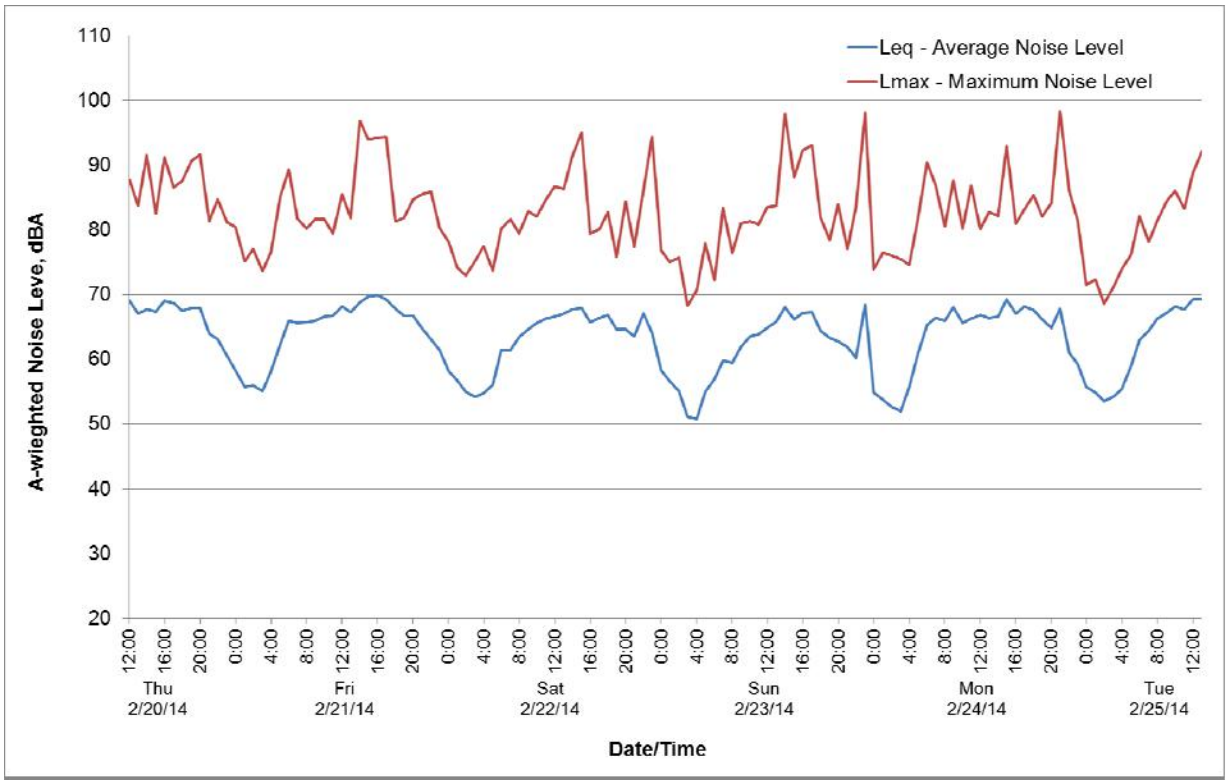


Table 3: Short-Term Noise Measurement Results – 25 February 2014

Location		Time	A-weighted Sound Level, dBA					
			L_{eq}	L_{max}	L_{10}	L_{50}	L_{90}	L_{dn}*
ST-1	South property line adjacent to auto repair shops.	12:25 - 2:05 P.M.	59	85	59	55	51	57

*Estimate of L_{dn} based on comparison of short-term measurements with results of long-term measurements and consideration that auto repair shops are daytime only uses.

Table 4: Railroad Noise and Ground Vibration Levels

Date	Time	Maximum Noise Level (Lmax), dBA		Vibration Level, VdB*
		Locomotive	Horn	
Thursday, 2/20/2014	12:22 PM	75	--	64
Thursday, 2/20/2014, 1:00 PM – Friday, 2/21/2014, 2:00 PM		Recordings not available – trains unknown		
Friday, 2/21/2014, 2:00 PM – Sunday, 2/23/2014		No trains		
Monday, 2/24/2014	7:44 AM	79	77	NM**
	10:17 AM	76	--	NM**
Tuesday, 2/25/2014	7:22 AM	75	77	NM**
	11:29 AM	74	--	NM**
	12:01 PM	73	81	65
Thursday, 3/20/2014	6:47 AM	77	75	NM**
	10:41 AM	79	--	NM**
	11:27 AM	75	85	NM**
	3:02 PM	73	82	NM**
Friday, 3/21/2014	6:54 AM	79	--	NM**
	10:27 AM	76	--	NM**

*VdB – Unit of vibration velocity level, decibels re 1 micro-inch per second.
**NM – Not Measured

4.2. Railroad Trains

Noise

Audio recordings made at monitor LT-1 were used to identify railroad train passbys. In general, there were 2 to 4 train passbys per weekday which occurred during daytime hours. There were no passbys on the weekend days. Trains observed at the project site were slow moving (roughly 10 mph) and were short, 1 or 2 engines and 0 or 1 railcar. As a result, the noise levels were relatively low compared to higher speed trains with many railcars. Also, the project site is not adjacent to an at-grade roadway crossing and, therefore, the trains do not sound their whistle as they pass. The southbound trains sound their whistles as they approach the crossing at Montague Expressway. Although the horn is audible, at this point, the trains are well past the project site.

On the day with the most passbys, the DNL contribution from trains at LT-1 was 51 dBA. Since, the overall DNL at this location is 58 dBA, the trains represent a relatively minor contributor to the overall noise exposure.

Vibration

The ground vibration level from two train passbys was measured and the maximum levels during the passbys were 64 VdB and 65 VdB. Calculations using the FTA methodology indicate that the indoor floor vibration levels will be approximately 3 VdB less after accounting for foundation coupling and floor resonance effects. This vibration level is expected to be just below the threshold of perception for most humans of 65 VdB, and well below the FTA impact criteria for infrequent events of 80 VdB.

4.3. Roadway Traffic

The major source of traffic noise at the project site is South Main Street. The project building would be located as close as 40 feet from the center of the near lane. The measured DNL at this setback is 69 dBA. Maximum noise levels (L_{max}) as shown in Figure 4 are range from 80 to 98 dBA and are due to trucks, motorcycles and occasional sirens.

4.4. Aircraft

Although the project site is more than two miles from San Jose International Airport, it is exposed to relatively frequent aircraft noise since the site is near some departure flight tracks for the airport. Most of the aircraft noise events generate an L_{max} of 70 dBA or less. Some of the aircraft L_{max}'s are in the range of 75 to 80 dBA which is similar to the noise levels from train passbys. The

airport noise contours indicate that the project site is well outside the CNEL 65 dBA noise contour.

4.5. Future Noise Levels

Traffic volumes will along South Main Street will increase to a level of up to 4,000 vehicles per hour[3]. Based on calculations using the Federal Highway Administrations Traffic Noise Model (TNM 2.5), the future noise exposure at the western edge of the project will be up to a DNL of 73 dBA.

It is unknown whether freight train activity on the adjacent tracks will increase or decrease in the future. If the train activity were to double, this would increase the train DNL contribution by 3 dBA. Since train noise is a relatively minor overall noise contributor, this would increase the overall DNL by 1 dBA (from 58 dBA to 59 dBA at LT-1).

5. Analysis/Recommendations

5.1. Outdoor Noise

The city's noise and land use compatibility guidelines consider a DNL of up to 65 dBA as "normally acceptable" for multi-family residential development. This is also the goal for noise in common outdoor use areas of multifamily residential developments. This is also the HUD outdoor noise standard. The only portion of the project site that will exceed this level is the area directly adjacent to South Main Street. Since the project's common outdoor use areas would be located toward the rear and interior of the project site, the additional distance to the road and the acoustical shielding from the building will reduce the noise exposure to meet the "normally acceptable" outdoor sound levels. Therefore, no additional measures are required.

5.2. Indoor Noise

The City and State require that interior noise levels must be reduced to an DNL of 45 dBA or less in habitable rooms. This standard is also consistent with the City and HUD requirements. Based on our analysis of existing and future noise levels, combined with a review of the planning submittal drawings dated 3-10-2014 the project can meet the interior noise requirements through the use of sound rated windows on the facades nearest South Main Street. The exterior walls will be constructed with metal studs, stucco on the exterior, gypsum board interior and batt insulation in the stud cavities (resilient channels are not required on the exterior walls for noise control). All windows and sliding glass doors of the four dwelling units (on each level) directly adjacent to South Main

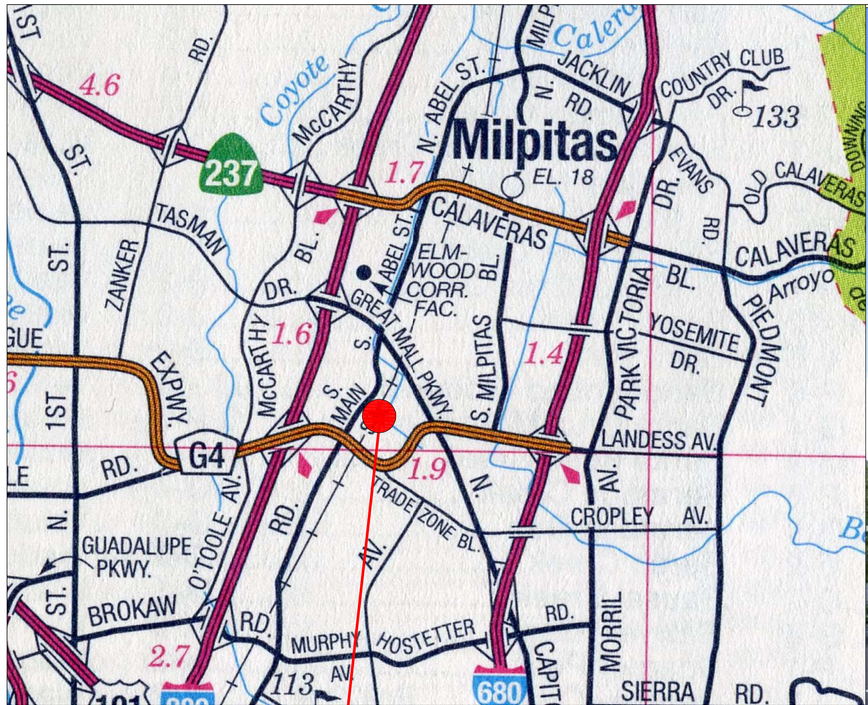
[3] Draft EIR, Milpitas Transit Area Specific Plan, October 2007.

Street should have a minimum Sound Transmission Class (STC) rating of 36. Swinging patio doors of these units should have a minimum STC rating of 32. The next units to the east (four units on each level) should have windows and sliding glass doors with minimum STC ratings of 30.

Some dwelling units will need to have closed windows to meet the indoor standard and will require an air conditioning or ventilation system in order to provide a habitable environment. These units include those with sound-rated windows as well as the units along the north and south facades which are within 210 feet of the west end of the buildings, and also units along the courtyard on the west side of the project which is open to South Main Street.

* * *

Attachment G



LOCATION MAP — NTS 1:12 — 2

SOUTH MAIN SENIOR LIFESTYLES

1600 SOUTH MAIN STREET, MILPITAS, CA

NORTHWEST CORNER OF BUILDING AT THE INTERSECTION OF SOUTH MAIN STREET AND CEDAR WAY — NTS 1:12 — 1

COLLABORATIVE DESIGN ARCHITECTS INC

Oakland, CA

6114 LaSalle Avenue
Oakland

PMB 465
California 94611-2802

TEL 510 339-8880 FAX 510 339-1642

ARCHITECT'S STAMP

REGISTERED ARCHITECT — JAMES R. BURNS, II — LIC.NO. C017234 — EXP. 1/31/2015 — STATE OF CALIFORNIA

CONSULTANT'S STAMP

Project Description

SOUTH MAIN
SENIOR LIFESTYLES LLC
PHASE ONE SENIOR HOUSING

1504-1620
South Main Street
Milpitas, California

SITE DEVELOPMENT PLAN
SD14-0006
VESTING TENTATIVE
TRACT MAP
TP-14-0001

Owner / Applicant:

Directory

Owner

South Main Senior Lifestyles LLC
5674 Stoneridge Drive, #212
Pleasanton, CA 94588
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cell: 925-872-4382
email: jwc@callahanpropertyco.co
Contact: James R. Burns, II
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RJA Engineers
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Gilroy, CA 65020
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email: jduran@rja-gps.com

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Description of Project

A. Location

The Property upon which the proposed Project will be developed is located at 1504-1620 South Main Street, Milpitas, California (APN's 086-22-027, 028, 046, 047 and 048) on the east side at its intersection of Cedar Street. The Property's gross land area is approximately 5.942 acres. The Property will be subdivided into two parcels to accommodate the two-phase development of the Property. The Phase 1 and Phase 2 Parcels will consist of approximately 3.02 and 2.92 gross acres, respectively. The Property is located within the "SP R4-TOD-S" Multi Family Very High Density with a Transit Oriented Development Overlay in the Milpitas Midtown Specific Plan Area. "SP R-4-TOD-S" zoning allows for development of 60 dwelling units/acre on the site (356 units) plus a maximum density bonus of 35% based on the number of affordable units the developments on the site would provide. The proposed Project will use only 389 of the total 480 units allowed with the maximum density bonus.

B. Proposed Project

The proposed Project is a 389-unit senior rental retirement community that will provide a continuum of care and services to its residents ranging from active independent living to congregate care and assisted living services. The Project will be developed in two phases, both restricted to occupancy by seniors at least 62 years of age. Of the total 389 units, 48 units will be restricted to occupancy by very low income households at rents that are below market rental rates. The Phase 1 Development will consist of 199 units of senior housing providing congregate care and assisted living services to its residents. The Phase 2 Development will consist of 190 units of active independent senior housing. ***This current submittal is for the Phase 1 Development only. Certain improvements that are within the boundaries of the Phase 2 Development will completed in Phase One. Those improvements include the work that is to be on South Main Street.***

C. Phase One Development

(a) Overview.

The Phase 1 Development will provide 10 units at below-market rental rates for occupancy by very low income (50% AMI) senior households and 189 units at market rental rates. In addition to accommodation in a unit, the monthly fee paid by all Phase 1 residents includes utilities and congregate care services (meals, housekeeping, scheduled transportation, 24-hour staffing, emergency response service, concierge services and a broad array of programs, events, classes and other activities). All 199 units in Phase 1 will be designed to be accessible to the disabled and licensed for assisted living, enabling congregate care residents to age in place and receive assisted living services (e.g., assistance with medication management, walking, dressing, grooming, bathing, toileting) as required without moving to another unit or to an assisted living facility. No Alzheimer/dementia care or skilled nursing services will be provided.

(b). Parking

The subterranean parking garage will have approximately 144 parking spaces and will be accessed from Costa Street. The amount of parking provided has been determined by historical data of projects of similar occupancy mix. The initial resident occupancy is anticipated to be 129 congregate care units and 70 assisted living units. As residents age in place this ratio is expected to reach 50% - 50%. The parking requirement for the proposed Phase 1 senior project is less than family housing owing to the age and non-ambulatory status of many residents. The parking provided in the garage is based on 0.7 parking space per congregate unit (129 DU at initial resident occupancy) or 91 parking spaces, plus staff parking of 35 spaces and one "small shuttle bus equating to 127 spaces. The balance of 17 spaces in the subterranean garage is allocated for visitor parking. No parking is provided for assisted living residents who are no longer capable of driving. There are approximately 27 spaces of additional visitor surface street parking along Costas Street, Cedar Way and South Main Street (within the Phase One Boundaries-more offstreet parking will be provided in Phase Two).

.

PROJECT INFORMATION — NTS 1:12 — 4

CURRENT ZONING: SP-R4-TOD-S OCCUPANCY CLASSIFICATION: RESIDENTIAL GROUP R-2.1 CONSTRUCTION TYPE: TYPE 1B

PROJECT GENERAL CODE INFORMATION — NTS 1:12 — 5

South Main Senior Lifestyles

Phase One - Assisted/Congregate Care — CONSTRUCTION TYPE 1-B — OCCUPANCY TYPE R-2.1

Square Footage By Use — 4/21/2014

	Parking Floor	First Floor	Second Floor	Third Floor	Fourth Floor	Total	% Of Overall	Total 1-4 Flrs	% Of 1-4 Flrs
Lobby/Front Doors	-	400	-	-	-	400	0.14%	400	0.14%
Staff Office	-	1,430	-	-	-	1,430	0.51%	1,430	0.51%
Dining	-	2,990	-	-	-	2,990	1.07%	2,990	1.07%
Private Dining	-	285	-	-	-	285	0.10%	285	0.10%
Kitchen	-	1,735	-	-	-	1,735	0.62%	1,735	0.79%
Dry Storage	-	675	-	-	-	675	0.24%	675	0.24%
Kitchen Trash	-	495	-	-	-	495	0.18%	495	0.18%
Trash Shoot Rms	-	145	130	130	130	535	0.19%	535	0.19%
Library/Living	-	2,105	-	-	-	2,105	0.76%	2,105	0.76%
Social/Bistro	-	1,425	-	-	-	1,425	0.51%	1,425	0.51%
Public Restrooms	-	819	80	80	80	1,059	0.38%	1,059	0.38%
Pool	-	1,600	-	-	-	1,600	0.57%	1,600	0.57%
Private Staff Restroom	-	65	-	-	-	65	0.02%	65	0.02%
Circulation	-	9,299	9,499	9,499	9,499	37,796	13.57%	37,796	13.57%
Fitness Area		1,450	-	-	-	1,450	0.52%	1,450	0.52%
Multi-Purpose	-	1,690	-	-	-	1,690	0.61%	1,690	0.61%
Staff Lounge	-	345	-	-	-	345	0.12%	345	0.12%
Theatre	-	1,150	-	-	-	1,150	0.41%	1,150	0.41%
Salon	-	430	-	-	-	430	0.15%	430	0.15%
Wellness Center	-	950	-	-	-	950	0.34%	950	0.34%
Van Parking	-	380	-	-	-	380	0.14%	380	0.14%
Mail Room	-	240	-	-	-	240	0.09%	240	0.09%
Living Units	-	21,646	42,914	42,914	42,914	150,388	53.99%	150,388	53.99%
Main Trash Processing Rm	540	-	-	-	-	540	0.19%		0.00%
Resident Storage	3,387	-	-	-	-	3,387	1.22%		0.00%
Mechanical/Storage	2,781	-	90	90	90	3,051	1.10%	270	0.10%
Janitor	-	98	70	70	70	308	0.11%	308	0.11%
Emergency Generator	417	-	-	-	-	417	0.15%		0.00%
Laundry	267	-	-	-	-	267	0.10%		0.00%
Pool Above Area	543	-	-	-	-	543	0.19%		0.00%
Pool Equipment Room	476	-	-	-	-	476	0.17%		0.00%
Maintenance Office	310	-	-	-	-	310	0.11%		0.00%
Elevator Equipment Room	340	-	-	-	-	340	0.12%		0.00%
Net Parking Area	59,294	-	-	-	-	59,294	21.29%		0.00%
SUB-TOTAL	**68,355**	**51,847**	**52,783**	**52,783**	**52,783**	**278,551**	100.00%		
Balconies		1,543	2,816	2,816	2,816				
Totals	**68,355**	**53,390**	**55,599**	**55,599**	**55,599**	**288,542**	100.00%		75.63%
Total 1-4 Floors (No Parking Level)		**53,390**	**55,599**	**55,599**	**55,599**	**220,187**			
COURTYARD CENTER	3,550								
COURTYARD EAST	2,880								
COURTYARD WEST	4,830								
"PORTE COCHERE"	4,650								
TOTAL EXTERIOR COMMON	15,910								

BUILDING AREA CALCULATIONS — NTS 1:12 — 3

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SUBMITTALS / REVISIONS

MARK	DESCRIPTION	DATE
	SITE DEVELOPMENT PLAN Resubmittal #1 VESTING TENTATIVE TRACT MAP Resubmittal #1	7-1-14

KEY PLAN: NTS

COVER SHEET

SHEET DESCRIPTION

NORTH

SCALE: AS NOTED

CDA FILE PATH:

DRWN: JRB
APPRV'D:
CDA PROJECT NO. 29003

CO.1
1 OF 34
SHEET NO.

RUGGERI-JENSEN-AZAR
ENGINEERS • PLANNERS • SURVEYORS
8055 CAMINO ARROYO GILROY, CA 95020
PHONE: (408) 848-0300 FAX: (408) 848-0302

EXISTING SITE CONDITIONS
SOUTH MAIN SENIOR LIFESTYLES PHASE 1
MILPITAS, CALIFORNIA

FOR:

SCALE	DATE
1"=40'	APRIL 21, 2014

DATE	BY	CK

SHEET REVISIONS

SHEET
G1.0
OF 2 OF 34 SHEETS

JOB NO.
092041

PARCEL 1:

All that certain Real Property situate in the City of Milpitas, County of Santa Clara, State of California, described as follows:

Parcels 1 and 2 as shown on that certain Parcel Map recorded January 11, 1995 in Book 662 of Maps, at Pages 5 and 6, together with a portion of Parcel A and a portion of Parcel B as described in Resolution No. 7208, a Lot Line Adjustment filed August 28, 2002 as Document No. 16444465, Records of Santa Clara County, California, more particularly described as follows:

Beginning at the northwest corner of said Parcel 2; thence along the northerly line of said Parcel 2 and the easterly prolongation thereof, S83°39'02"E, a distance of 427.71 feet; thence along a line drawn parallel to and 46.00 feet westerly, measured at right angles to the east line of said Parcel B, S02°30'31"E, a distance of 194.14 feet to the south line of said Parcel B; thence along the south line of Parcel B, Parcel A and Parcel 1, N83°39'02"W, a distance of 466.52 feet to the west line of said Parcel 1; thence along said west line along the arc of a non-tangent curve to the right having a radius of 1,952.00 feet, the center of which bears S83°10'27"E, through a central angle of 02°57'55", an arc distance of 101.02 feet; thence N09°47'28"E, a distance of 91.04 feet to the **Point of Beginning**.

Containing an area of 85,933square feet, more or less.
As shown on "Exhibit B" attached hereto.

PARCEL 2:

All that certain Real Property situate in the City of Milpitas, County of Santa Clara, State of California, described as follows:

A strip of land 46.00 feet in width, being a portion of Parcel B as described in Resolution No. 7208, a Lot Line Adjustment filed August 28, 2002 as Document No. 16444465, Records of Santa Clara County, California, more particularly described as follows:

Beginning at a point on the east line of said Parcel B, distant thereon S83°39'02"W, a distance of 474.27 feet from the northwest corner of said Parcel 2; thence along the east line of said Parcel B S02°30'31"E, a distance of 194.14 feet to the southeast corner of said Parcel B; thence along the south line of said Parcel B, N83°39'02"W, a distance of 46.56 feet; thence N02°30'31"W, a distance of 194.14 feet to the easterly prolongation of said Parcel 2; thence S83°39'02"E, a distance of 46.56 feet to the **Point of Beginning**.

Containing an area of 8,931 square feet, more or less.
As shown on "Exhibit B" attached hereto.

PARCEL 3:

All that certain Real Property situate in the City of Milpitas, County of Santa Clara, State of California, described as follows:

A strip of land 50.00 feet in width being a portion of Parcel A and a portion of Parcel B as described in Resolution No. 7208, a Lot Line Adjustment filed August 28, 2002 as Document No. 16444465, Records of Santa Clara County, California, more particularly described as follows:

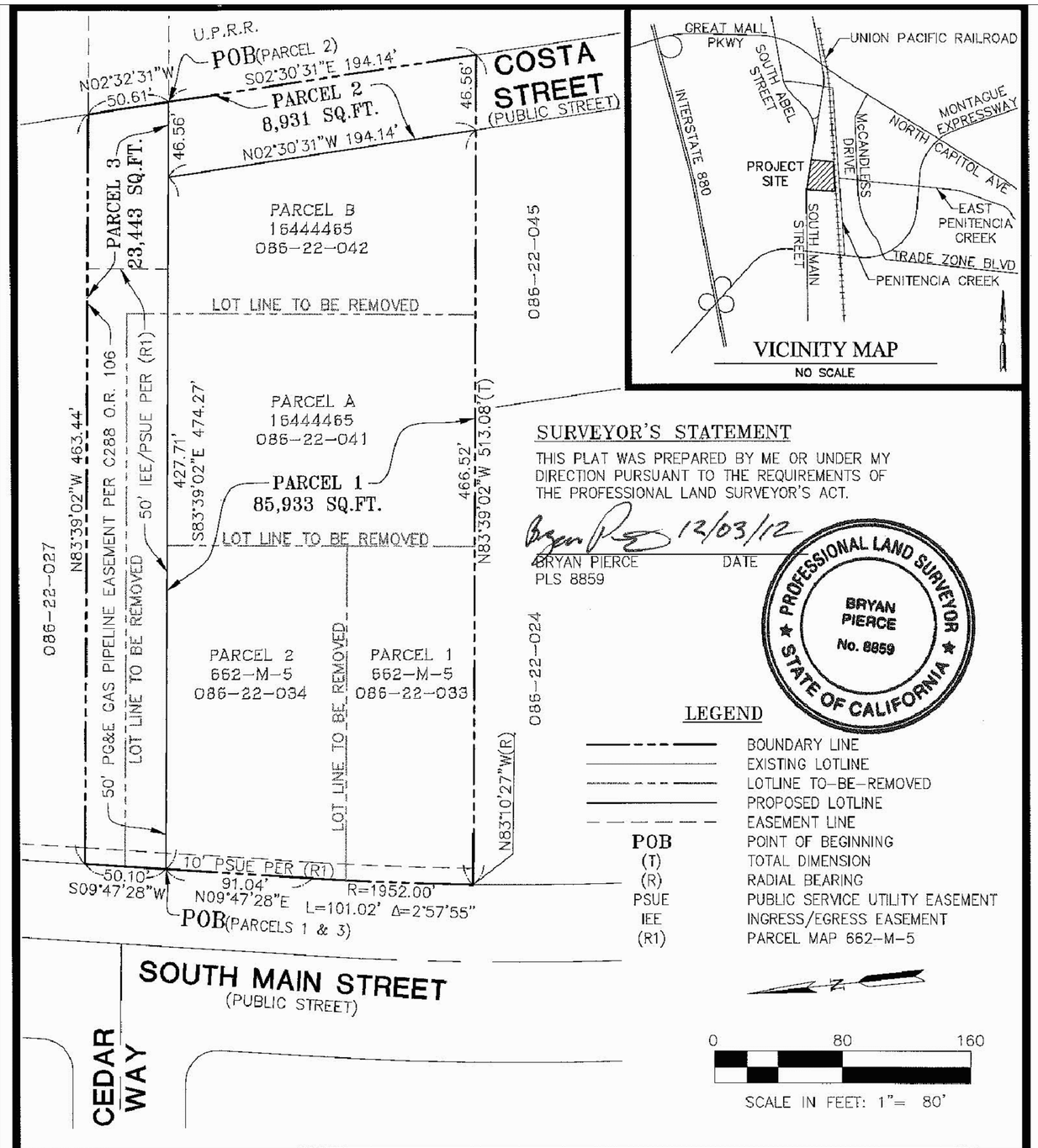
Beginning at a point on the west line of said Parcel A, said point being coincident with the northwest corner of said Parcel 2; thence along the common line between Parcel A and Parcel 2 and the easterly prolongation thereof, S83°39'02"E, a distance of 474.27 feet to the east line said Parcel B; thence along the east line of said Parcel B, N02°32'31"W, a distance of 50.61 feet to the northeast corner of said Parcel B; thence along the north line of Parcel B, N83°39'02"W, a distance of 463.44 feet to the northwest corner of said Parcel B; thence along the west line of Parcel B and Parcel A, S09°47'28"W, a distance of 50.10 feet to the **Point of Beginning**.

Containing an area of 23,443 square feet, more or less.
As shown on "Exhibit B" attached hereto.

This legal description was prepared by me or under my direction pursuant to the requirements of the Professional Land Surveyor's Act.

PROFESSIONAL LAND SURVEYOR — BRYAN PIERCE — No. 8859 — STATE OF CALIFORNIA

12/03/12
Bryan Pierce, PLS 8859 — Date



"EXHIBIT B"
PLAT TO ACCOMPANY
CERTIFICATE OF COMPLIANCE
BEING PARCELS A & B AS SHOWN ON THE LOT LINE ADJUSTMENT FILED IN DOC. NO. 16444465 AND PARCELS 1 & 2, AS SHOWN ON THE PARCEL MAP RECORDED IN BOOK 662 OF MAPS, AT PAGES 5 AND 6, RECORDS OF SANTA CLARA COUNTY, CITY OF MILPITAS, SANTA CLARA COUNTY, CALIFORNIA

RJA
RUGGERI-JENSEN-AZAR
ENGINEERS ▪ PLANNERS ▪ SURVEYORS
8055 CAMINO ARROYO GILROY, CA 95020
PHONE: (408) 848-0300 FAX: (408) 848-0302

SCALE:	DATE:	JOB NO.:
1" = 80'	12/03/2012	092041

PHASE ONE PROPERTY DESCRIBED FROM LOT LINE ADJUSTMENT RECORDED 3-22-13

COLLABORATIVE DESIGN ARCHITECTS INC
Oakland, CA
6114 LaSalle Avenue
Oakland
PMB 465
California 94611-2802
TEL 510 339-8880
FAX 510 339-1642

ARCHITECT'S STAMP — REGISTERED ARCHITECT — JAMES R. BURNS, II — LIC.NO. C017234 EXP. 1/31/2015 — STATE OF CALIFORNIA

CONSULTANT'S STAMP

Project Description

SOUTH MAIN
SENIOR LIFESTYLES LLC
PHASE ONE SENIOR HOUSING

1504-1620
South Main Street
Milpitas, California

SITE DEVELOPMENT PLAN
SD14-0006
VESTING TENTATIVE
TRACT MAP
TP-14-0001

Owner / Applicant:

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SUBMITTALS / REVISIONS

MARK	DESCRIPTION	DATE
	SITE DEVELOPMENT PLAN Resubmittal #1 VESTING TENTATIVE TRACT MAP Resubmittal #1	7-1-14

KEY PLAN: NTS

GENERAL INFORMATION
PROPERTY LEGAL DESCRIPTION
FOR PHASE ONE BOUNDARIES
SHEET DESCRIPTION

NORTH

SCALE: AS NOTED
DRWN: JRB
APPRV'D:
CDA FILE PATH:
29003
CDA PROJECT NO.
G1.1
3 OF 34
SHEET NO.

NTS
1:12
1

ACCESSIBILITY PATH

1"=20'
1:12
#

COLLABORATIVE DESIGN ARCHITECTS INC

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KEY PLAN: NTS

GENERAL INFORMATION
PATH OF ACCESSIBILITY

SHEET DESCRIPTION

NORTH

SCALE: AS NOTED

DRWN: JRB
APPRV'D:

CDA FILE PATH:

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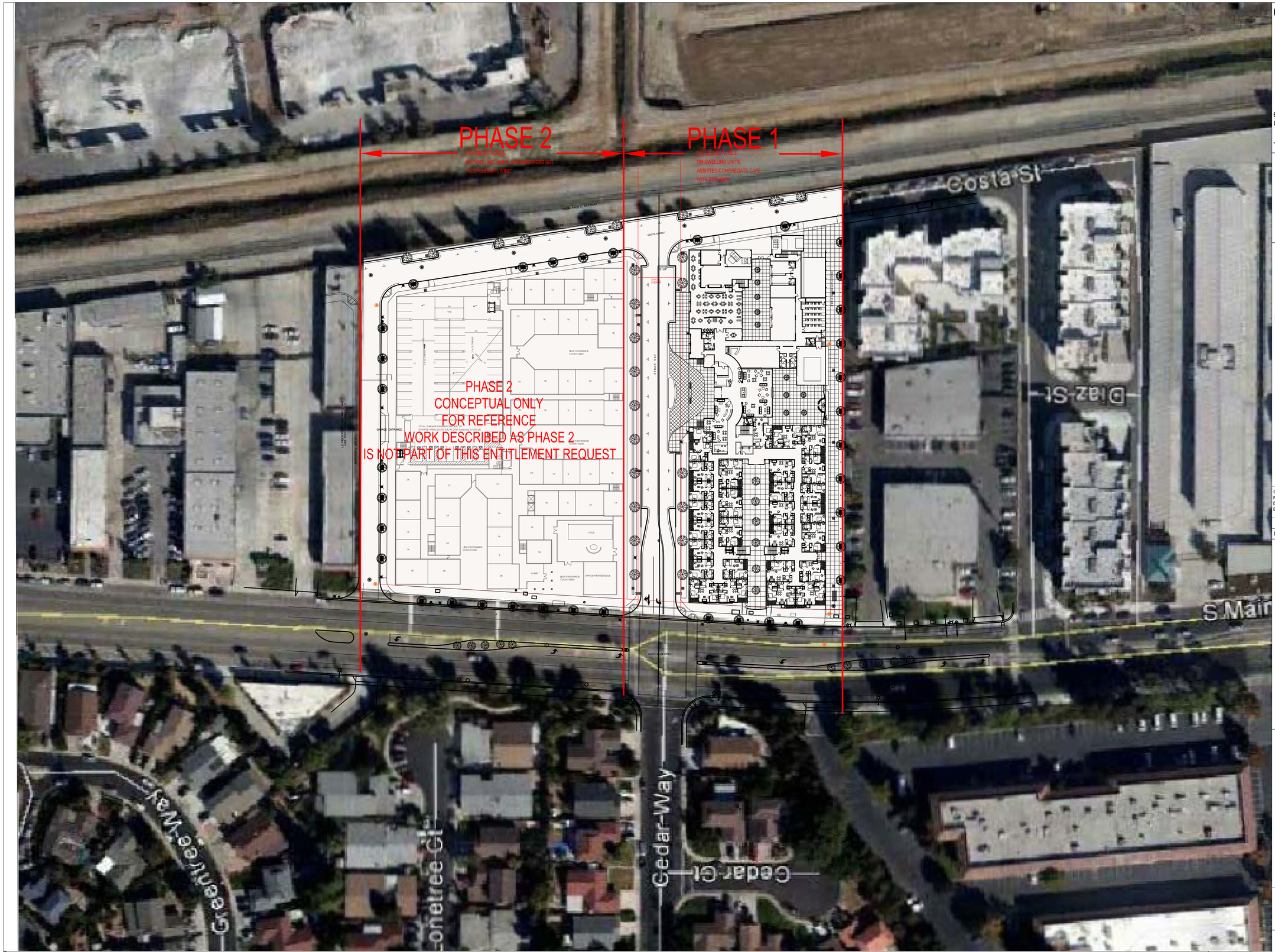
CDA PROJECT NO.

G1.2
4 OF 34
SHEET NO.



SITE PLAN WITH SURROUNDING AREAS

COLLABORATIVE DESIGN ARCHITECTS INC

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KEY PLAN: NTS

SITE PLAN PHASE
1 & 2 w/arial
SHEET DESCRIPTION

NORTH reference

SCALE: AS NOTED

DRWN: JRB
APPRVD:
29003
CDA PROJECT NO.

CDA FILE PATH:

A1.0
5 OF 34
SHEET NO.

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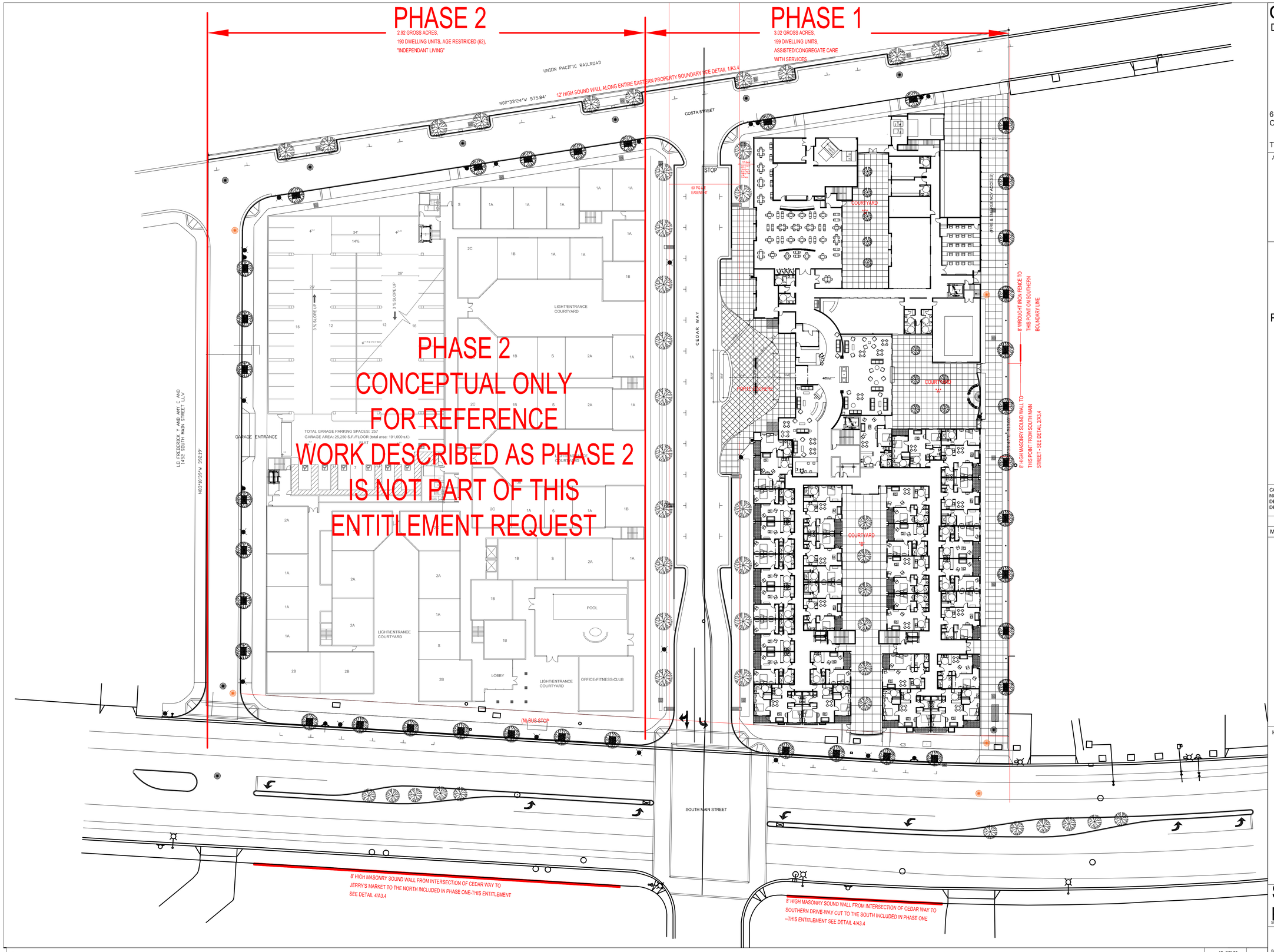

SITE PLAN

1"=30'-0"
1:12

1

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SITE PLAN
PHASE 1 & 2
SHEET DESCRIPTION

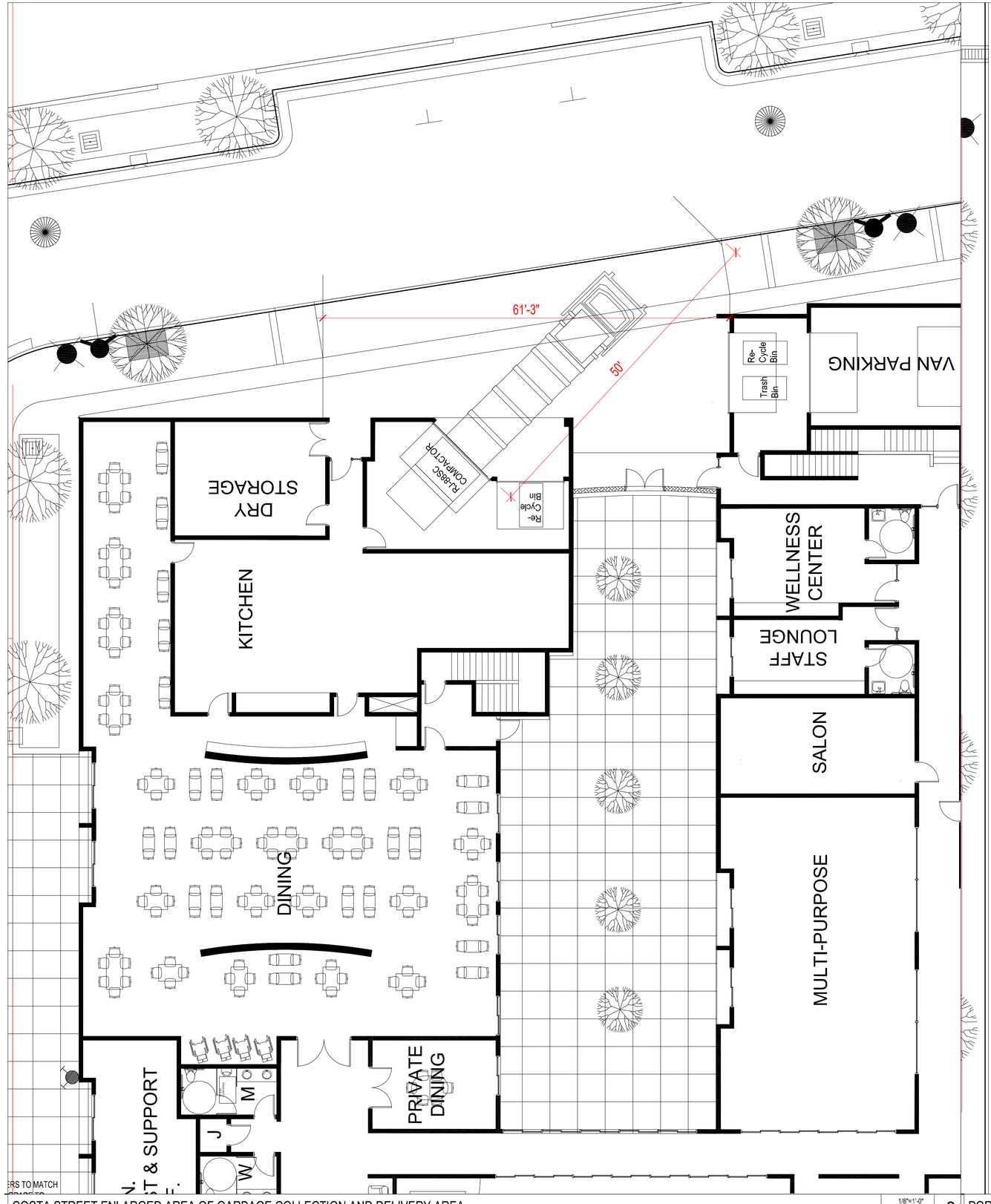
NORTH reference

SCALE: AS NOTED

DRAWN: JRB
APPRV'D: 29003
CDA PROJECT NO.

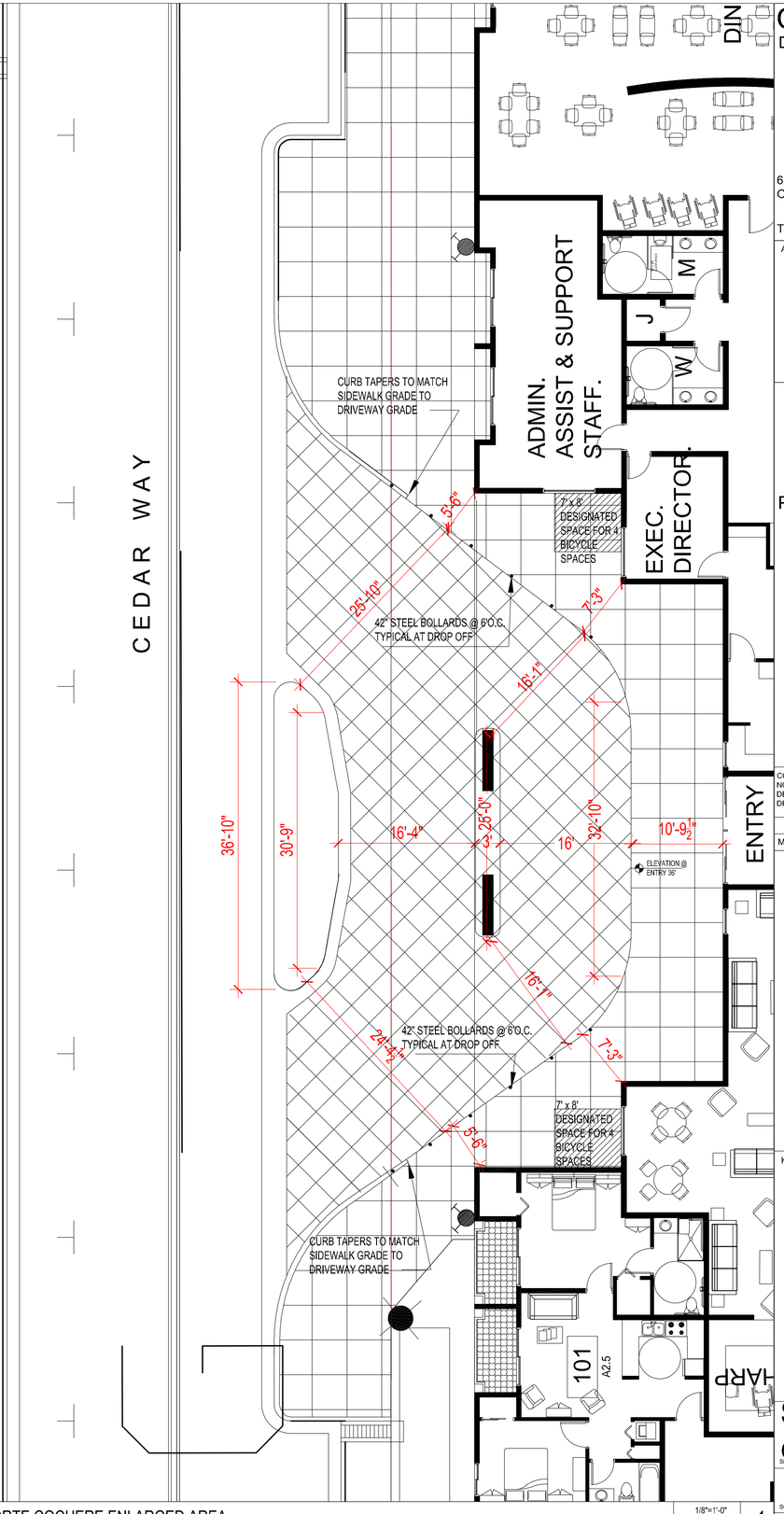
CDA FILE PATH:

A1.1
6 OF 34
SHEET NO.



COSTA STREET ENLARGED AREA OF GARBAGE COLLECTION AND DELIVERY AREA

1/8"=1'-0" 1:12 2



PORTE COCHERE ENLARGED AREA

1/8"=1'-0" 1:12 1

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	VESTING TENTATIVE TRACT MAP Resubmittal #1	

KEY PLAN: NTS

SITE PLAN
enlarged areas
SHEET DESCRIPTION

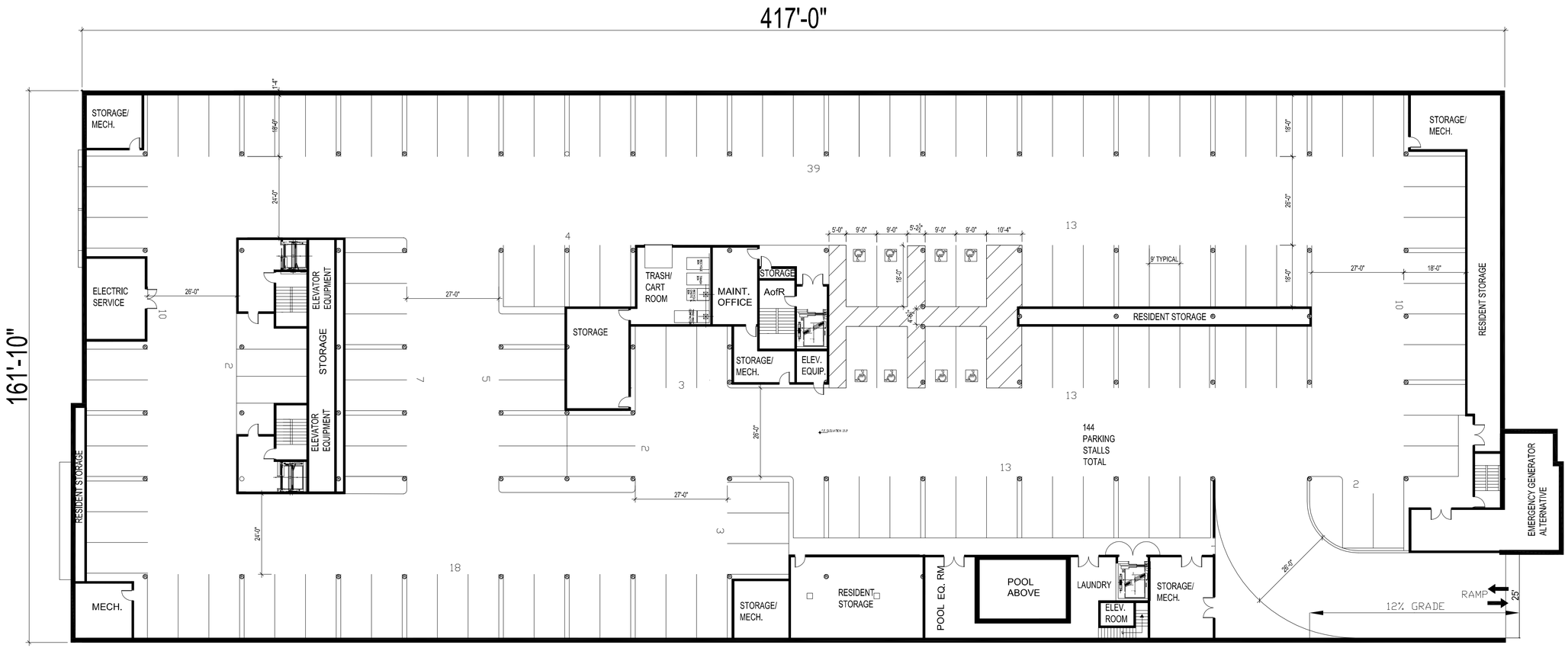
NORTH reference

SCALE: AS NOTED

DRWN: JRB
APPRV'D:
29003
CDA PROJECT NO.

A1.1a
7 OF 34
SHEET NO.

CDA FILE PATH:



SUBTERRANEAN GARAGE LEVEL

1/16"=1'-0"
1:12

1

COLLABORATIVE DESIGN ARCHITECTS INC

Oakland, CA

6114 LaSalle Avenue
Oakland

PMB 465
California 94611-2802

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FAX 510 339-1642

ARCHITECT'S STAMP

REGISTERED ARCHITECT
JAMES R. BURNS, III
LIC.NO. C017234
EXP. 1/31/2015
STATE OF CALIFORNIA

CONSULTANT'S STAMP

Project Description

SOUTH MAIN
SENIOR LIFESTYLES LLC
PHASE ONE SENIOR HOUSING

1504-1620
South Main Street
Milpitas, California

SITE DEVELOPMENT PLAN
SD14-0006
VESTING TENTATIVE
TRACT MAP
TP-14-0001

Owner / Applicant:

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SUBMITTALS / REVISIONS

MARK	DESCRIPTION	DATE
	SITE DEVELOPMENT PLAN Resubmittal #1 VESTING TENTATIVE TRACT MAP Resubmittal #1	7-1-14

KEY PLAN: NTS

GARAGE LEVEL
PHASE ONE
SHEET DESCRIPTION

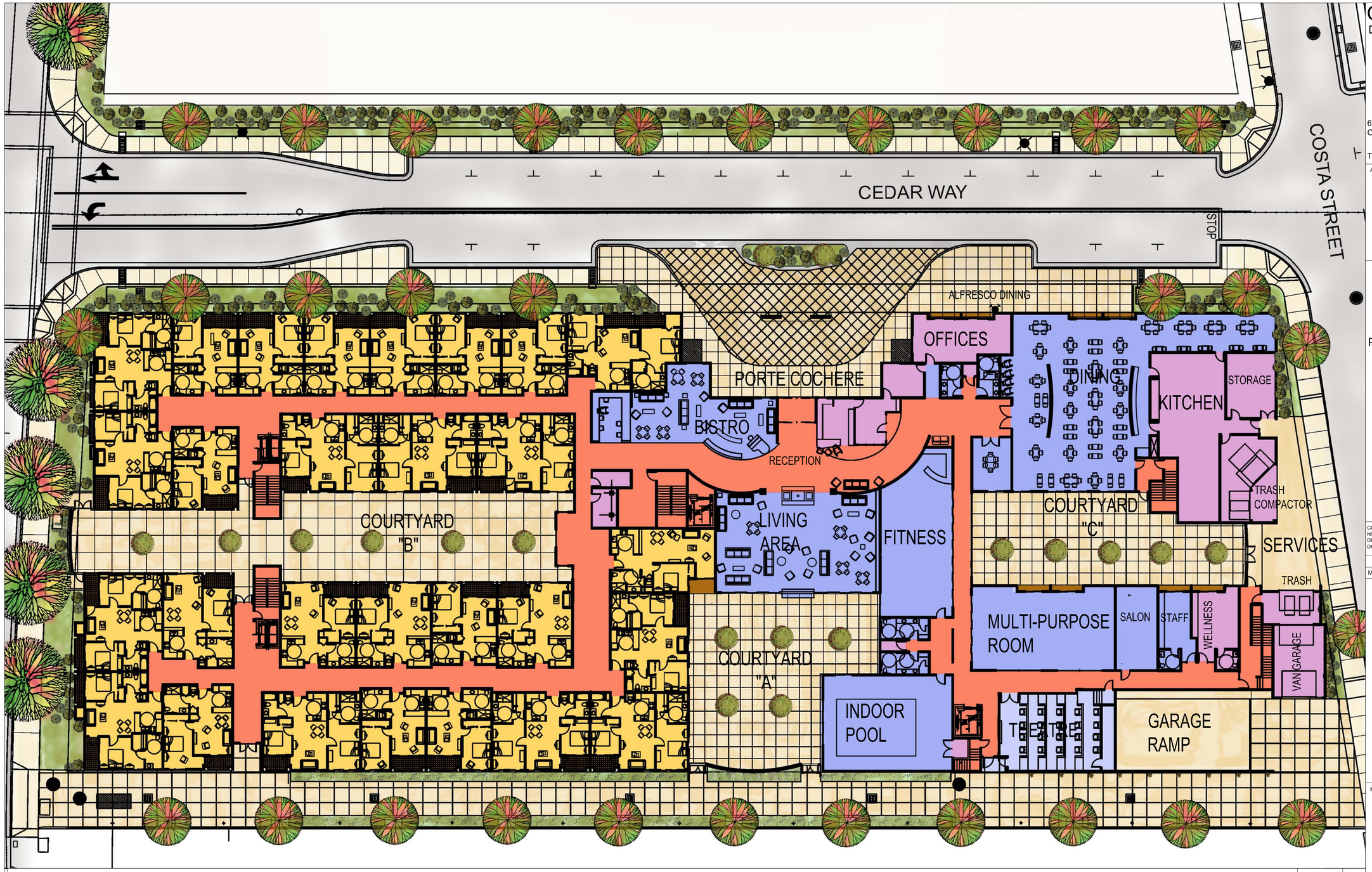
NORTH

SCALE: AS NOTED

DRWN: JRB
APPRV'D:
29003
CDA PROJECT NO.

CDA FILE PATH:

A2.0
8 OF 34
SHEET NO.



FIRST FLOOR PLAN PHASE ONE

1/16"=1'-0" | 1:12 | 1

RESIDENCE AREA

PUBLIC SPACE

CIRCULATION

ADMINISTATION & SERVICE AREAS

EXTERIOR UNIT PATIOS

USE COLOR CODES

1/16"=1'-0" | 1:12 | 2

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KEY PLAN: NTS

FIRST FLOOR PLAN PHASE ONE

SHEET DESCRIPTION

NORTH

SCALE: AS NOTED

DRWN: JRB

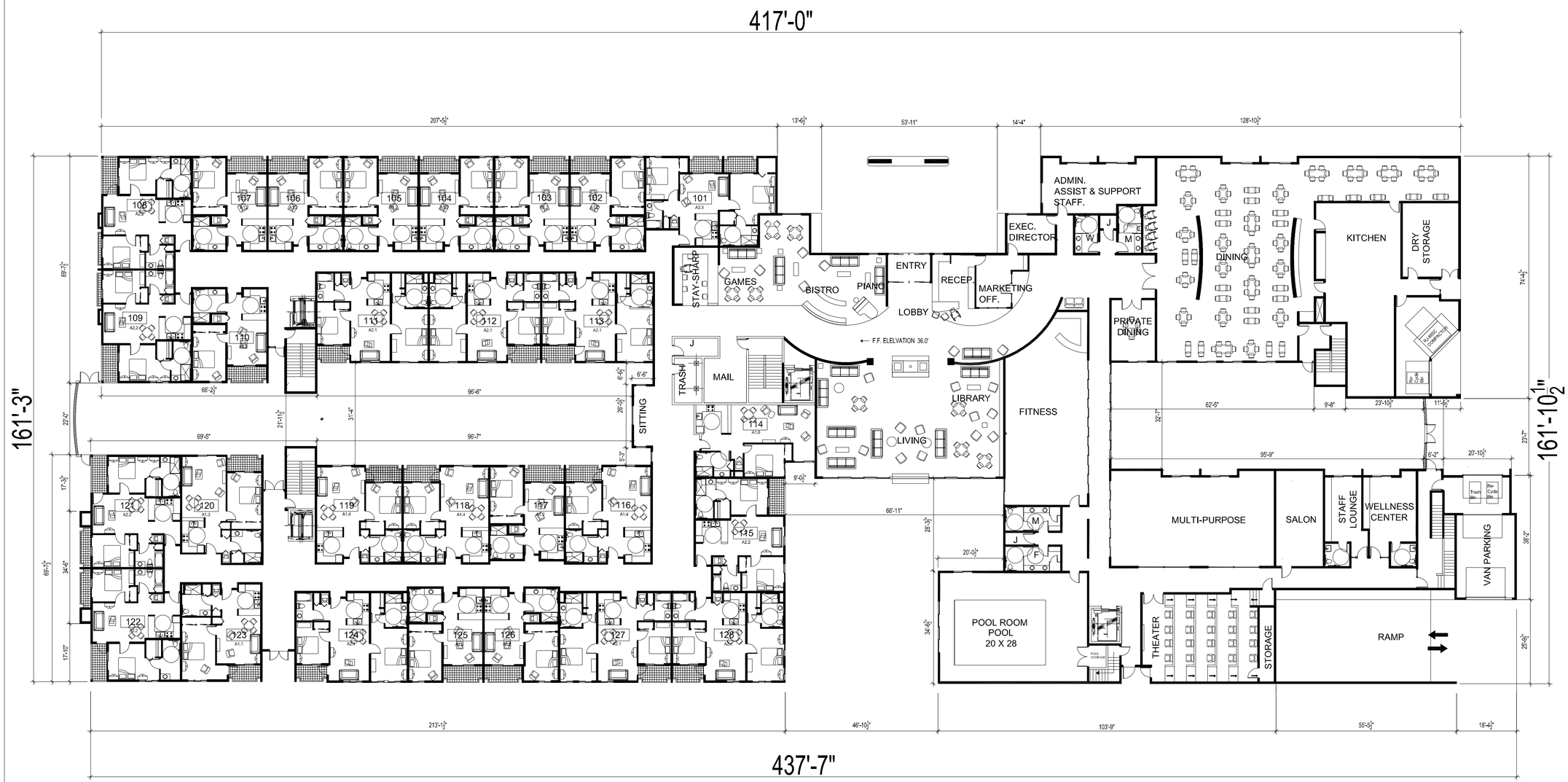
APPRV'D:

29003
CDA PROJECT NO.

CDA FILE PATH:

A2.1

9 OF 34
SHEET NO.



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	SITE DEVELOPMENT PLAN Resubmittal #1 VESTING TENTATIVE TRACT MAP Resubmittal #1	7-1-14

KEY PLAN: NTS

FIRST FLOOR
PLAN PHASE ONE

SHEET DESCRIPTION

NORTH

SCALE: AS NOTED

DRWN: JRB
APPRVD:
29003
CDA PROJECT NO.

CDA FILE PATH:

A2.1a
10 OF 34
SHEET NO.

FIRST FLOOR PLAN PHASE ONE

1/16"=1'-0"
1:12

1

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KEY PLAN: NTS

SECOND FLOOR

SHEET DESCRIPTION

NORTH

SCALE: AS NOTED

CDA FILE PATH:

DRWN: JRB

APPRV'D:

29003
CDA PROJECT NO.

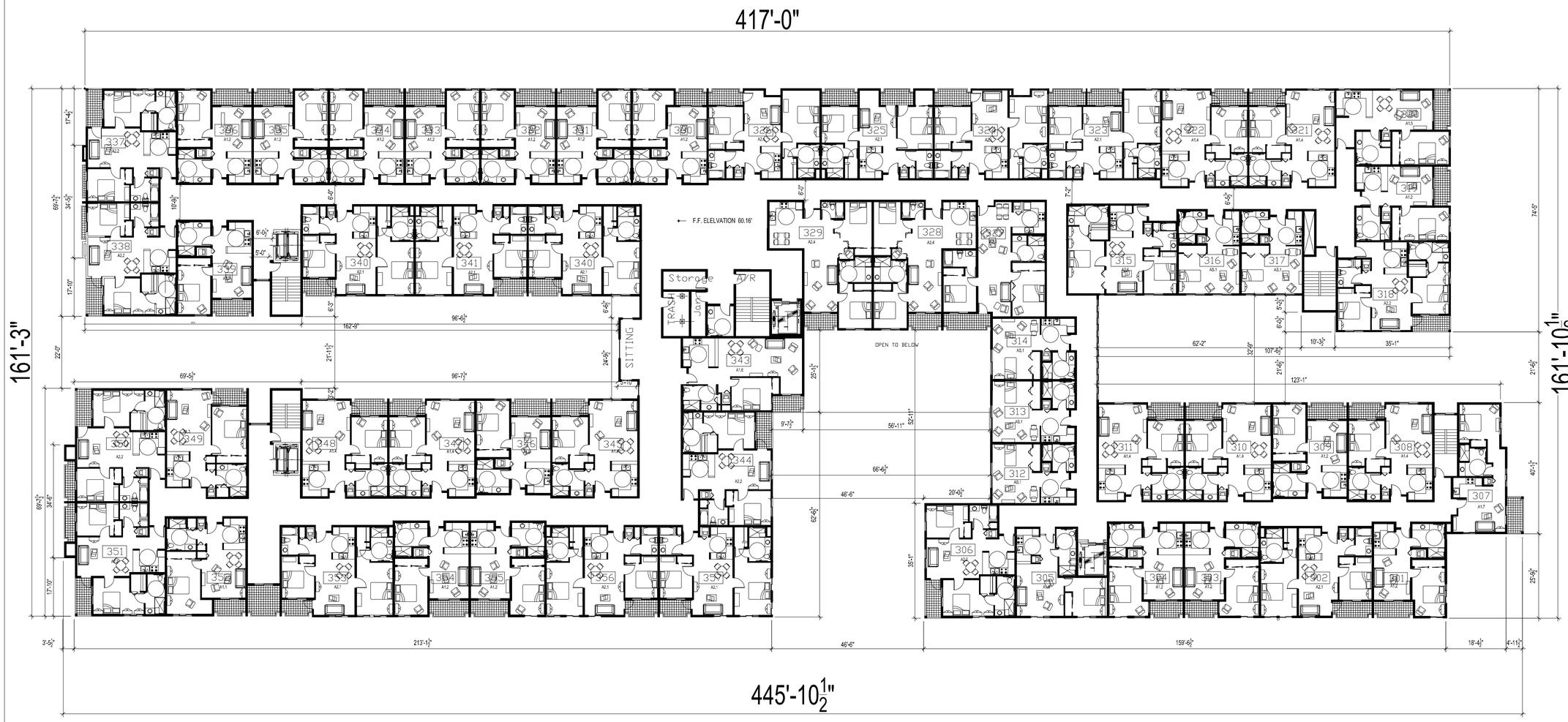
A2.2
11 OF 34
SHEET NO.

SECOND FLOOR PLAN

1/16"=1'-0"

1:12

1



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KEY PLAN: NTS

THIRD FLOOR

SHEET DESCRIPTION

NORTH

SCALE: AS NOTED

DRWN: JRB
APPRV'D:

CDA FILE PATH:

29003
CDA PROJECT NO.

A2.3
12 OF 34
SHEET NO.

THIRD FLOOR

1/16"=1'-0"
1:12

1

FOURTH FLOOR PLAN

1/16"=1'-0"
1:12

1

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KEY PLAN: NTS

FOURTH FLOOR

SHEET DESCRIPTION

NORTH REFERENCE

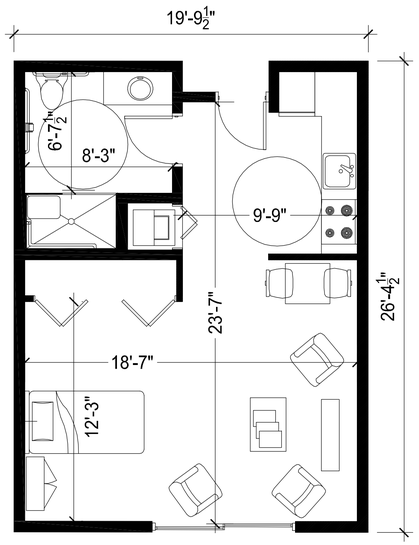
SCALE: AS NOTED

DRWN: JRB
APPRVD:

CDA FILE PATH:

29003
CDA PROJECT NO.

A2.4
SHEET NO.



AS.1 UNIT - STUDIO (505 SF), 15 TOTAL UNITS THIS UNIT TYPE

1/4"=1'-0" | 1:12 | 2

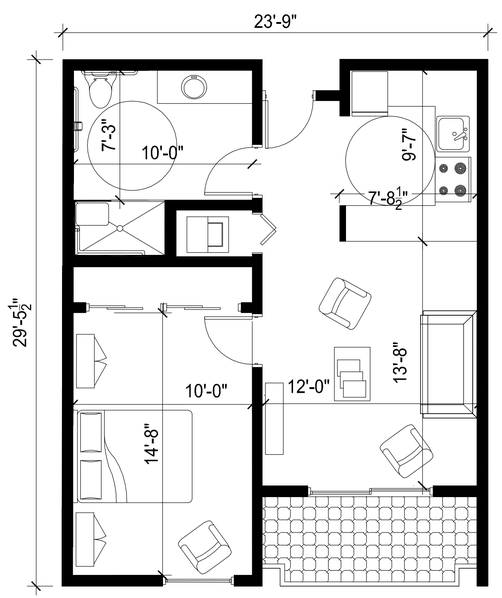
South Main Senior Lifestyles

Phase One - Assisted/Congregate Care Construction Type - 1B

	Studio	1 Bedroom								2 Bedroom							TOTAL
Floor	AS.1	A1.1	A1.2	A1.3	A1.4	A1.5	A1.6	A1.7	A1.8	A2.1	A2.2	A2.3	A2.4	A2.5	A2.6	A2.7	UNITS
1	0	1	10	1	3	0	1	0	0	6	5	0	0	1	0	0	28
2	5	1	16	1	8	1	1	1	1	11	6	1	2	0	1	1	57
3	5	1	16	1	8	1	1	1	1	11	7	1	2	0	1	0	57
4	5	1	16	1	8	1	1	1	1	11	7	1	2	0	1	0	57
Total	15	4	58	4	27	3	4	3	3	39	25	3	6	1	3	1	199
% of Unit Mix	8%	2%	29%	2%	14%	2%	2%	2%	2%	20%	13%	2%	3%	1%	2%	1%	100%
	15				106							78					199
% of Unit Type	8%				53%							39%					100%

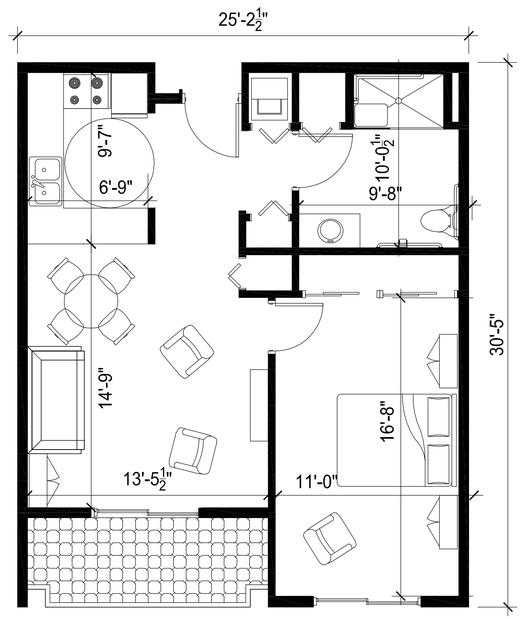
UNIT MIX CALCULATIONS

NTS | 1:12 | 1



A1.2 UNIT - ONE BEDROOM, ONE BATH (620 SF), 58 TOTAL UNITS THIS UNIT TYPE

1/4"=1'-0" | 1:12 | 4



A1.1 UNIT - ONE BEDROOM, ONE BATH (681 SF), 4 TOTAL UNITS THIS UNIT TYPE

1/4"=1'-0" | 1:12 | 3

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SENIOR LIFESTYLES LLC
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VESTING TENTATIVE
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SUBMITTALS / REVISIONS

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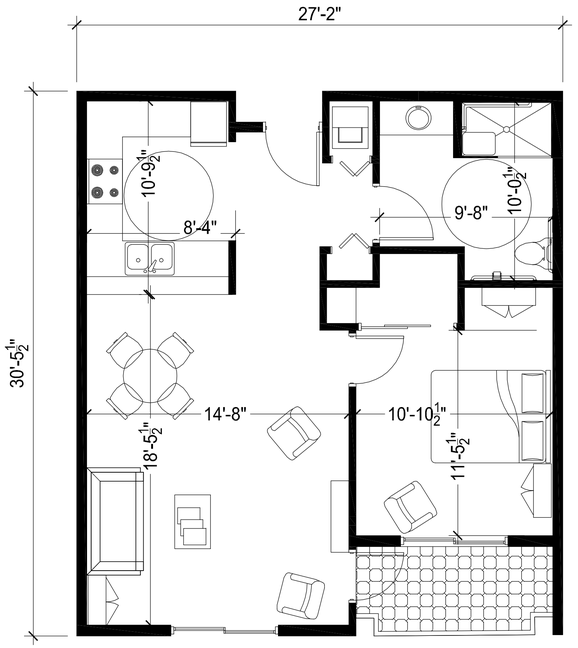
	SITE DEVELOPMENT PLAN Resubmittal #1 VESTING TENTATIVE TRACT MAP Resubmittal #1	7-1-14

KEY PLAN: NTS

INDIVIDUAL UNIT PLANS
SHEET DESCRIPTION

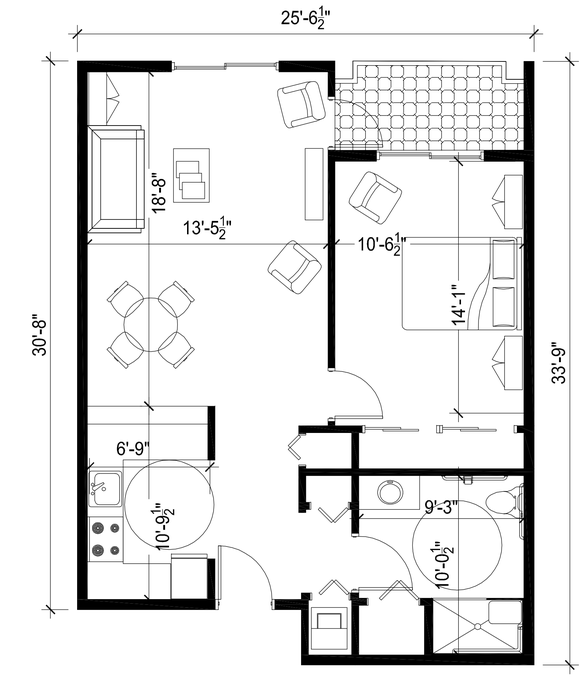
NORTH

SCALE: AS NOTED
DRWN: JRB
APPRV'D:
CDA FILE PATH:
29003
CDA PROJECT NO.
A2.5
SHEET NO.



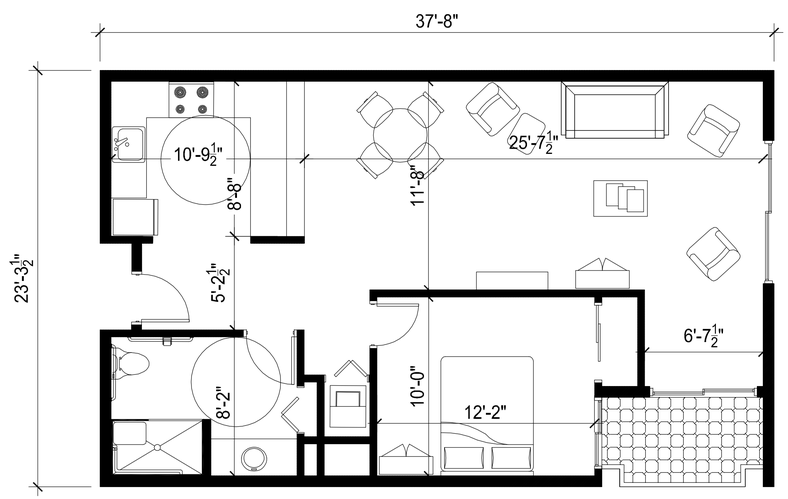
A1.4 UNIT - ONE BEDROOM, ONE BATH (753 SF), 27 TOTAL UNITS THIS UNIT TYPE

1/4"=1'-0" | 1:12 | 2



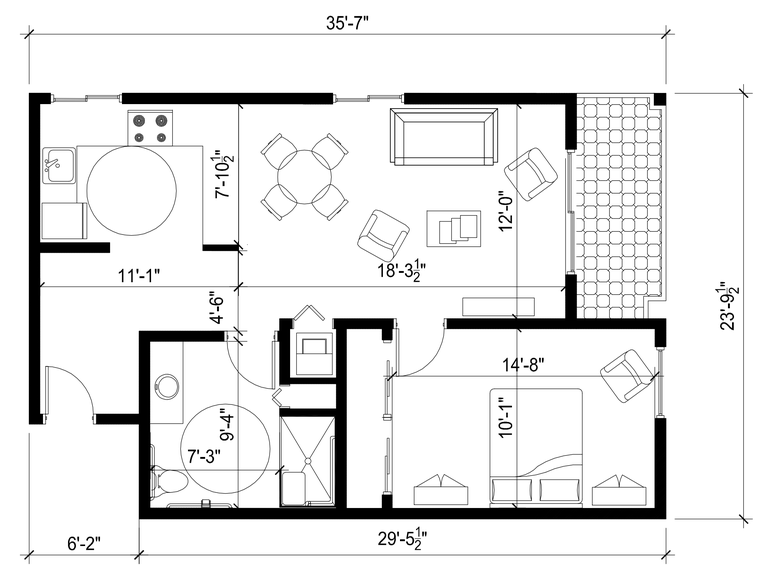
A1.3 UNIT - ONE BEDROOM, ONE BATH (750 SF), 4 TOTAL UNIT THIS UNIT TYPE

1/4"=1'-0" | 1:12 | 1



A1.6 UNIT - ONE BEDROOM, ONE BATH (807 SF), 4 TOTAL UNITS THIS UNIT TYPE

1/4"=1'-0" | 1:12 | 4



A1.5 UNIT - ONE BEDROOM, ONE BATH (736 SF), 3 TOTAL UNITS THIS UNIT TYPE

1/4"=1'-0" | 1:12 | 3

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	SITE DEVELOPMENT PLAN Resubmittal #1 VESTING TENTATIVE TRACT MAP Resubmittal #1	7-1-14

KEY PLAN: NTS

INDIVIDUAL UNIT PLANS
SHEET DESCRIPTION

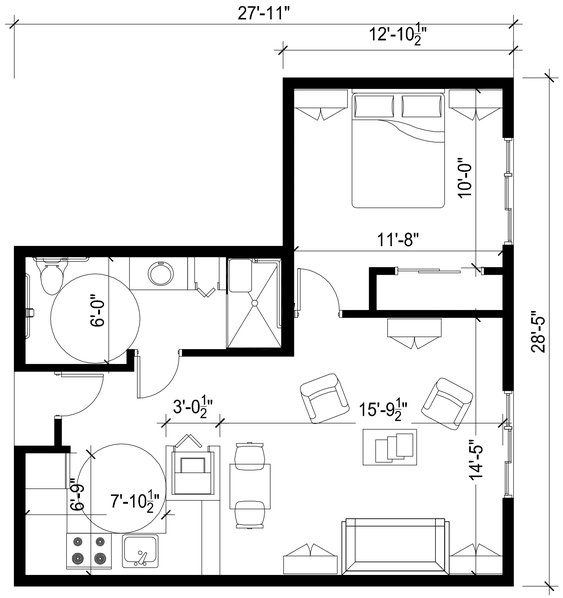
NORTH

SCALE: AS NOTED

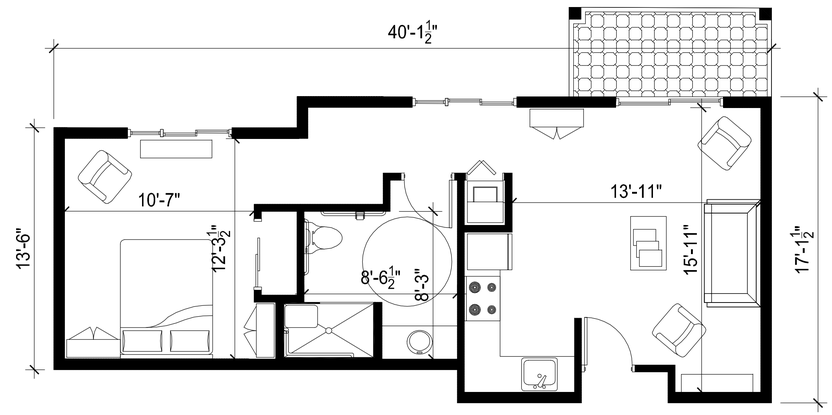
DRWN: JRB
APPRV'D:
29003
CDA PROJECT NO.

CDA FILE PATH:

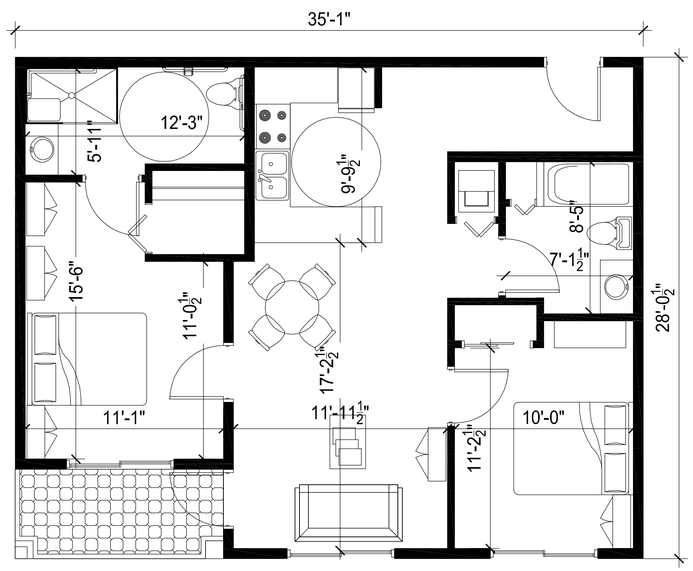
A2.6
15 OF 34
SHEET NO.



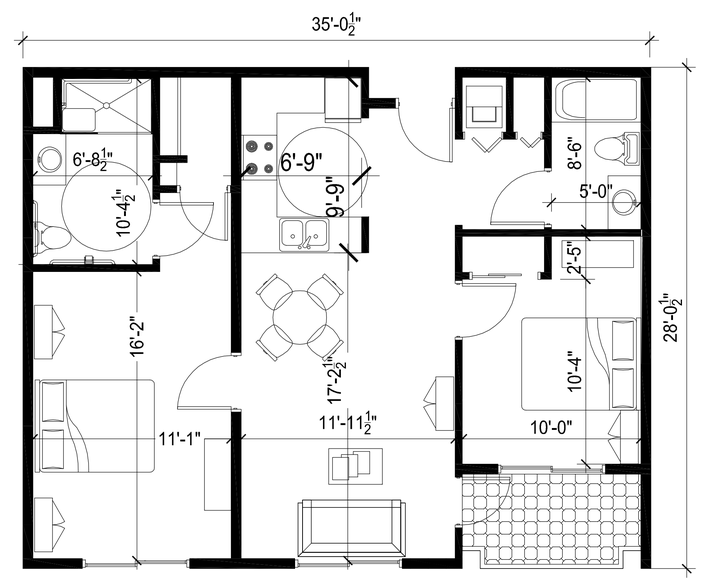
A1.8 UNIT - ONE BEDROOM, ONE BATH (650 SF), 3 TOTAL UNITS THIS UNIT TYPE | 1/4"=1'-0" 1:12 | 2



A1.7 UNIT - ONE BEDROOM, ONE BATH (613 SF), 3 TOTAL UNITS THIS UNIT TYPE | 1/4"=1'-0" 1:12 | 1



A2.2 UNIT -TWO BEDROOM, TWO BATH (911 SF), 26 TOTAL UNITS THIS UNIT TYPE | 1/4"=1'-0" 1:12 | 4



A2.1 UNIT - TWO BEDROOM, TWO BATH (913 SF), 39 TOTAL UNITS THIS UNIT TYPE | 1/4"=1'-0" 1:12 | 3

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KEY PLAN: NTS

INDIVIDUAL UNIT PLANS
SHEET DESCRIPTION

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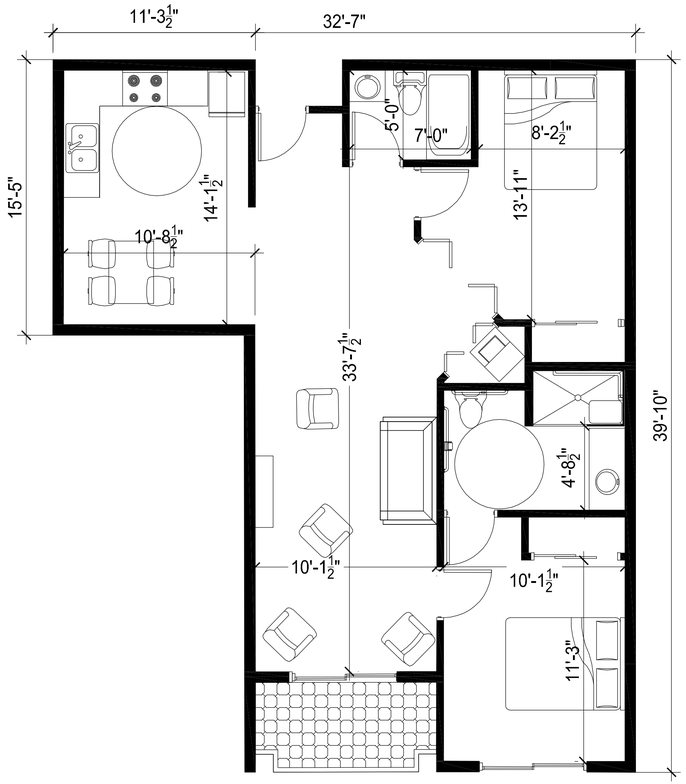
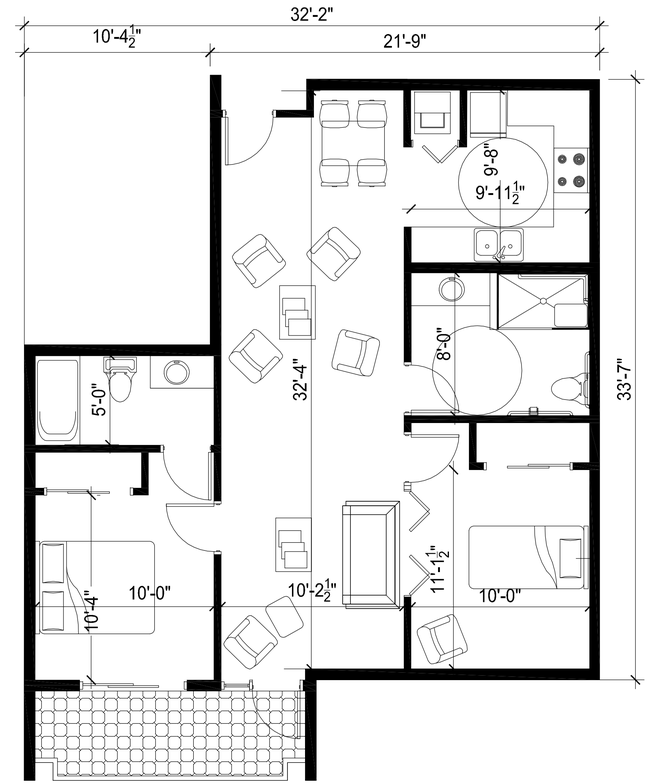
SCALE: AS NOTED

DRWN: JRB
APPRV'D:
CDA FILE PATH:
29003
CDA PROJECT NO.

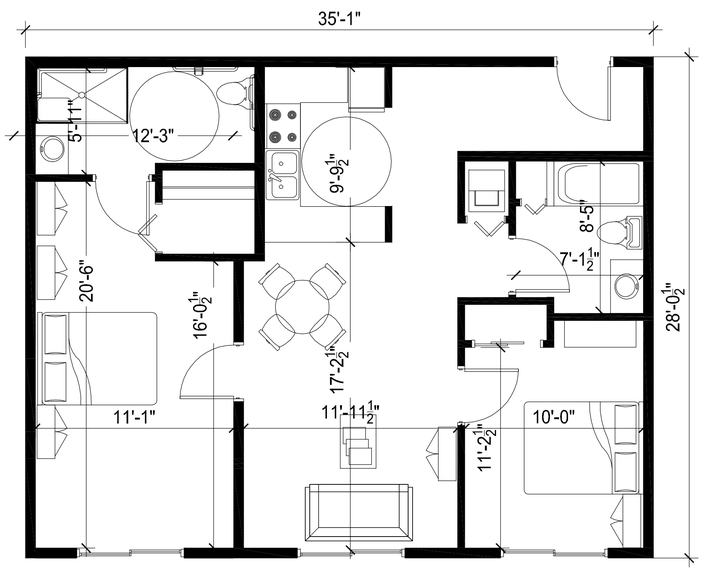
A2.7
16 OF 34
SHEET NO.



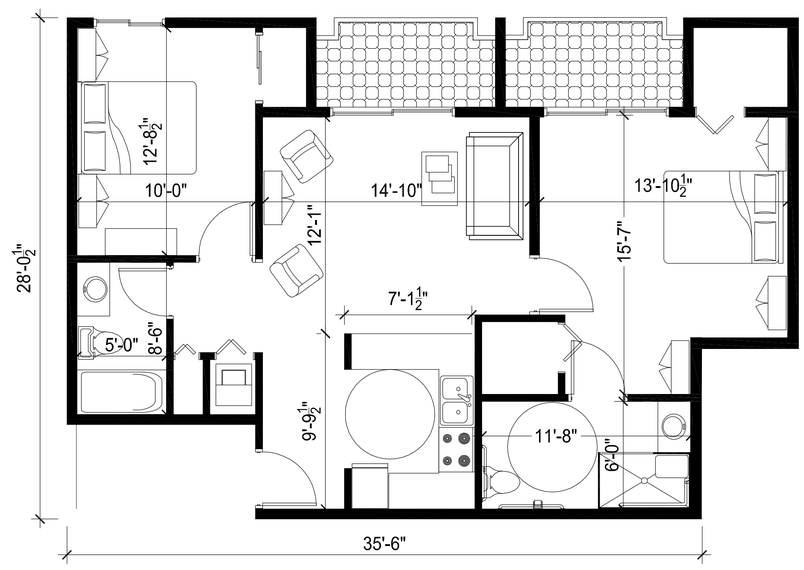
A2.4 UNIT - TWO BEDROOM, TWO BATH (957 SF), 6 TOTAL UNITS THIS UNIT TYPE | 1/4"=1'-0" 1:12 | 2



A2.3 UNIT PLAN - TWO BEDROOM, TWO BATH (916 SF), 3 TOTAL UNITS THIS UNIT TYPE | 1/4"=1'-0" 1:12 | 1



A2.6 UNIT PLAN - TWO BEDROOM, TWO BATH (960 SF), 3 TOTAL | 1/4"=1'-0" 1:12 | 4



A2.5 UNIT PLAN - TWO BEDROOM, TWO BATH (918 SF), 1 TOTAL | 1/4"=1'-0" 1:12 | 3

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KEY PLAN: NTS

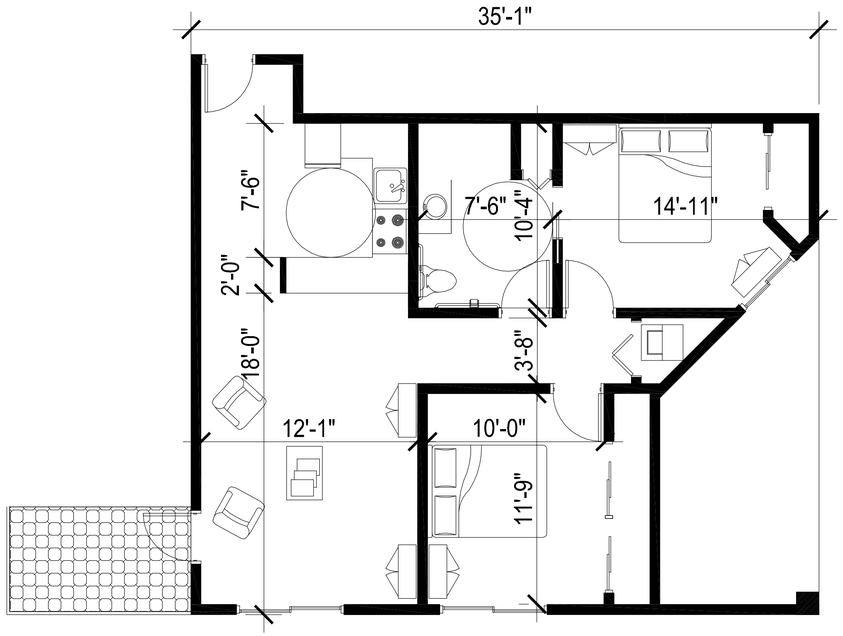
INDIVIDUAL UNIT PLANS
SHEET DESCRIPTION

NORTH

SCALE: AS NOTED

DRWN: JRB
APPRV'D:
CDA FILE PATH:
29003
CDA PROJECT NO.

A2.8
17 OF 34
SHEET NO.



A2.7 UNIT PLAN - TWO BEDROOM, ONE BATH (850 SF), 1 TOTAL UNITS THIS UNIT TYPE

1/4"=1'-0"
1:12
1

COLLABORATIVE DESIGN ARCHITECTS INC

Oakland, CA

6114 LaSalle Avenue
Oakland

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California 94611-2802

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FAX 510 339-1642

ARCHITECT'S STAMP

REGISTERED ARCHITECT
JAMES R. BURNS, II
LIC.NO. C017234
EXP. 1/31/2015
STATE OF CALIFORNIA

CONSULTANT'S STAMP

Project Description

SOUTH MAIN
SENIOR LIFESTYLES LLC
PHASE ONE SENIOR HOUSING

1504-1620
South Main Street
Milpitas, California

SITE DEVELOPMENT PLAN
SD14-0006
VESTING TENTATIVE
TRACT MAP
TP-14-0001

Owner / Applicant:

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SUBMITTALS / REVISIONS

MARK	DESCRIPTION	DATE
	SITE DEVELOPMENT PLAN Resubmittal #1 VESTING TENTATIVE TRACT MAP Resubmittal #1	7-1-14

KEY PLAN: NTS

INDIVIDUAL UNIT PLANS
SHEET DESCRIPTION

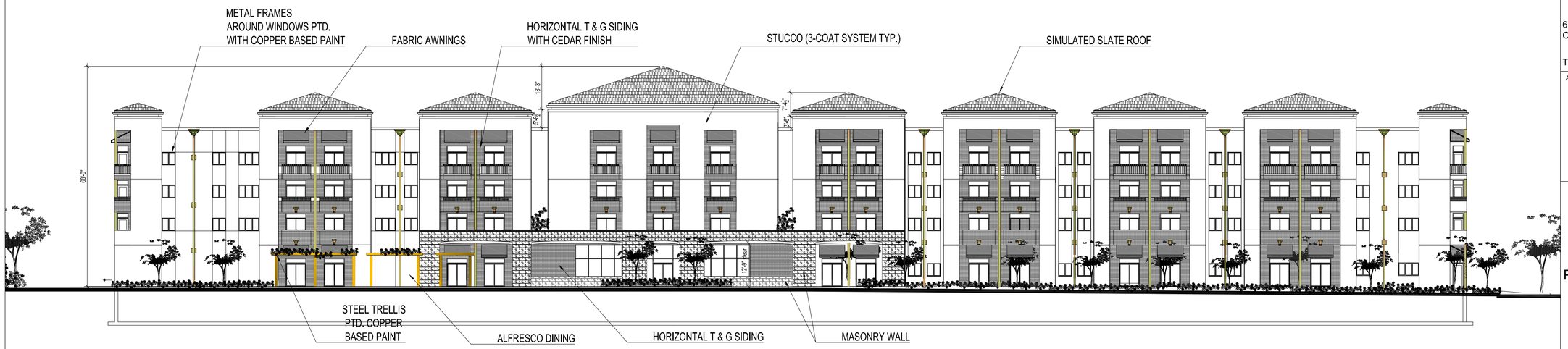
NORTH

SCALE: AS NOTED

DRWN: JRB
APPRVD:
29003
CDA PROJECT NO.

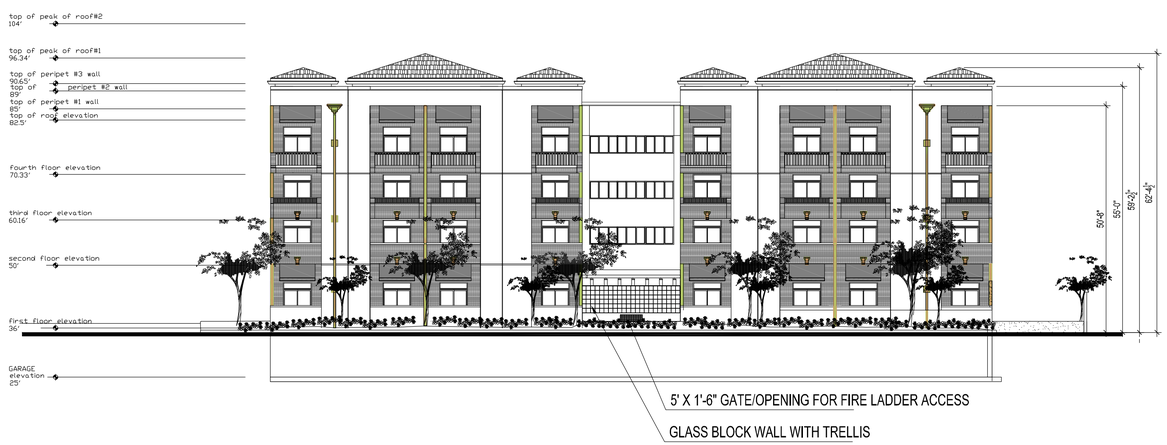
CDA FILE PATH:

A2.9
18 of 34
SHEET NO.



NORTH ELEVATION FACING CEDAR WAY

1/16"=1'-0"
1:12
1



WEST ELEVATION FACING SOUTH MAIN STREET

1/16"=1'-0"
1:12
2

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MARK	DESCRIPTION	DATE
	SITE DEVELOPMENT PLAN Resubmittal #1 VESTING TENTATIVE TRACT MAP Resubmittal #1	7-1-14

KEY PLAN: NTS

NORTH & WEST ELEV.
PHASE ONE

SHEET DESCRIPTION

NORTH

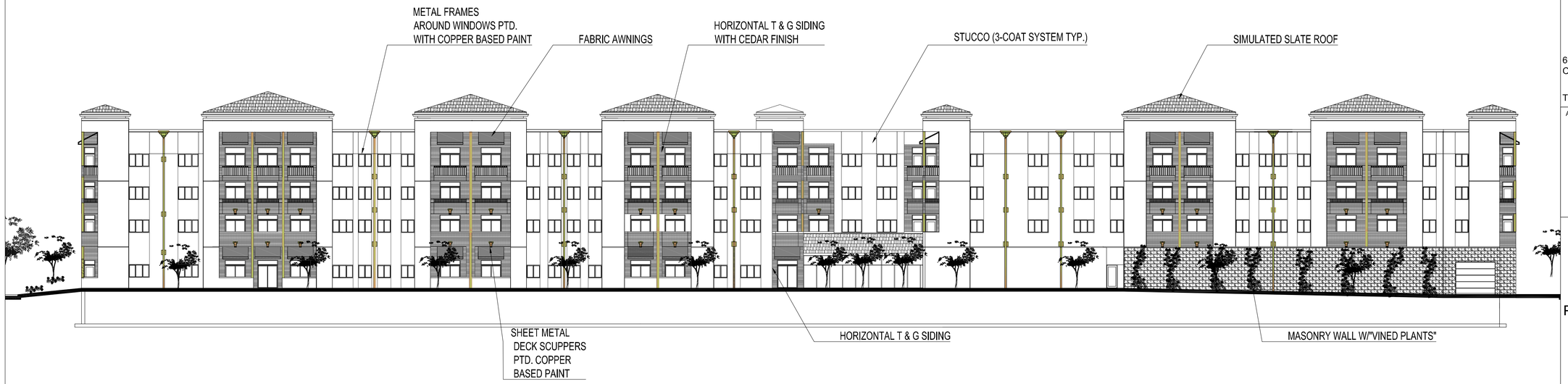
SCALE: AS NOTED

DRWN: JRB
APPRV'D:

CDA FILE PATH:

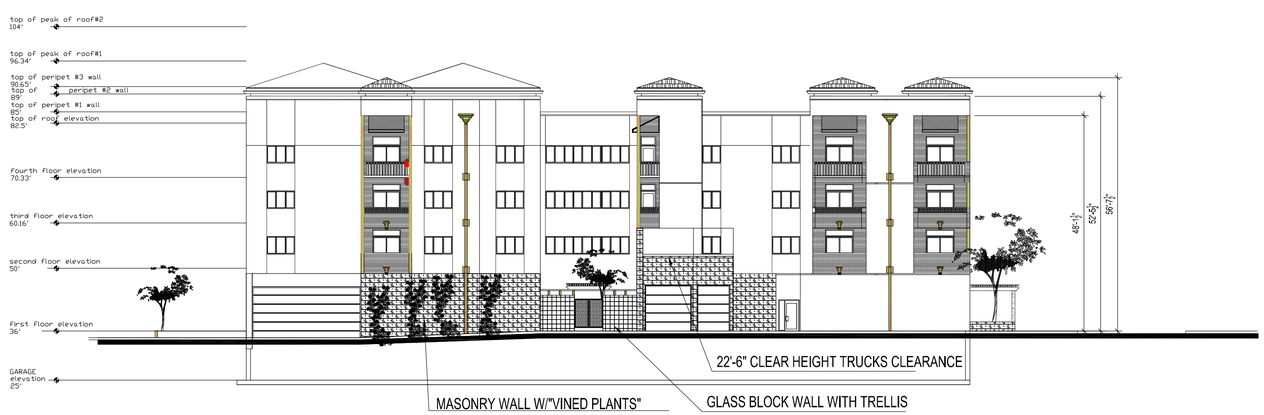
29003
CDA PROJECT NO.

A3.1
19 OF 34
SHEET NO.



SOUTH ELEVATION FACING "EVA"

1/16"=1'-0" | 1:12 | 1



EAST ELEVATION FACING COSTA STREET

1/16"=1'-0" | 1:12 | 2

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JAMES R. BURNS, III
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SUBMITTALS / REVISIONS

MARK	DESCRIPTION	DATE
	SITE DEVELOPMENT PLAN Resubmittal #1 VESTING TENTATIVE TRACT MAP Resubmittal #1	7-1-14

KEY PLAN: NTS

SOUTH & EAST ELEV.
PHASE ONE

SHEET DESCRIPTION

NORTH

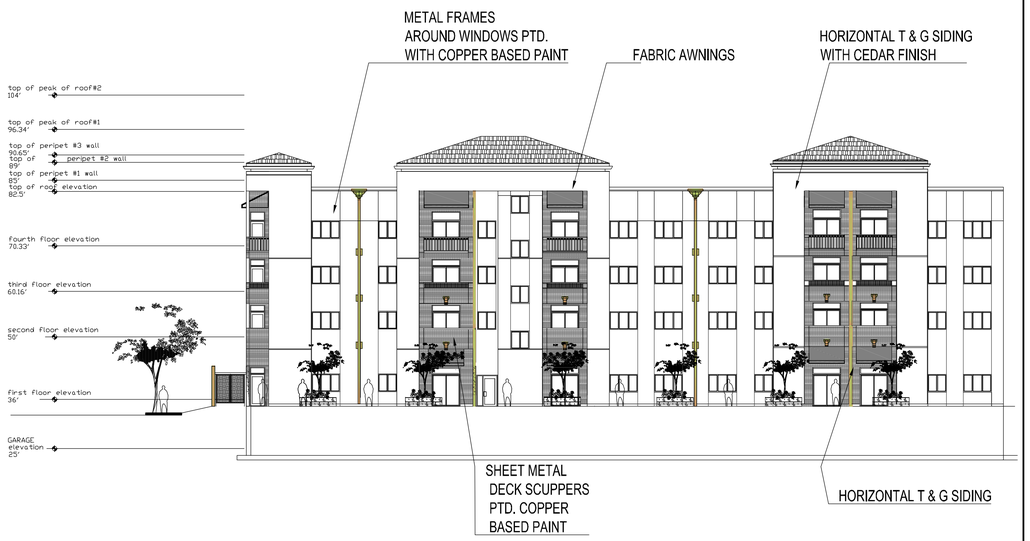
SCALE: AS NOTED

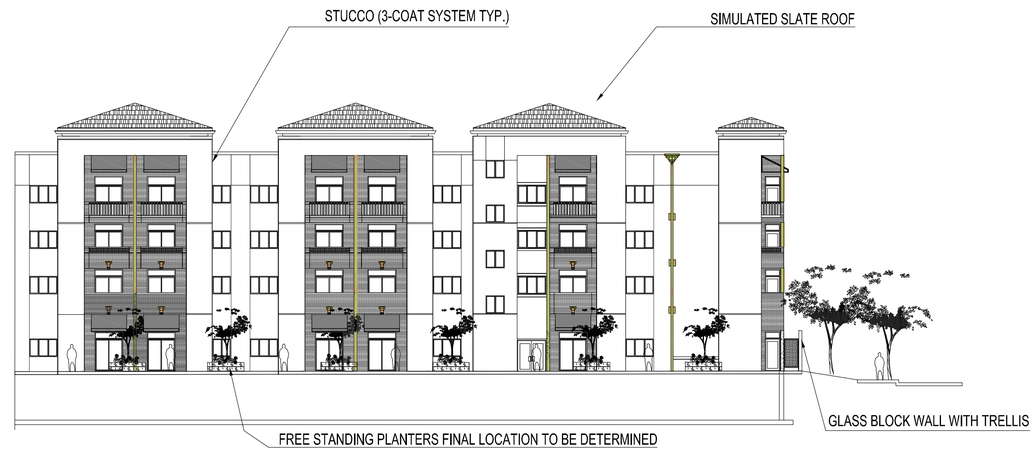
DRWN: JRB
APPRV'D:

CDA FILE PATH:

29003
CDA PROJECT NO.

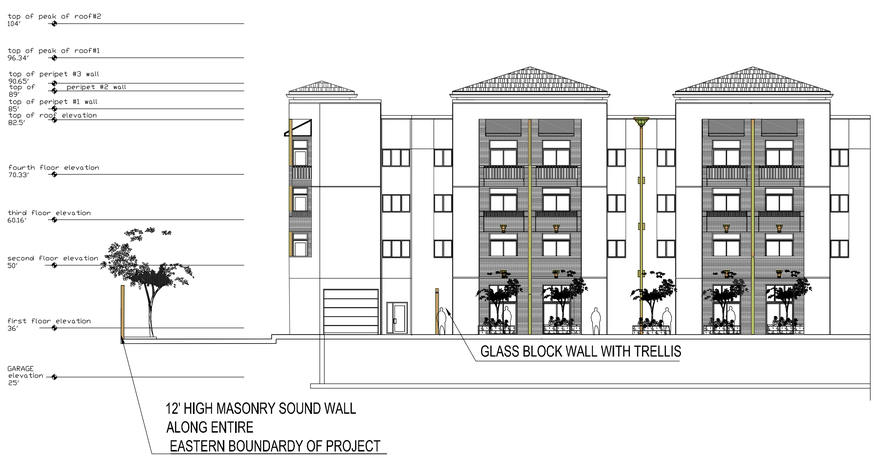
A3.2
20 OF 34
SHEET NO.

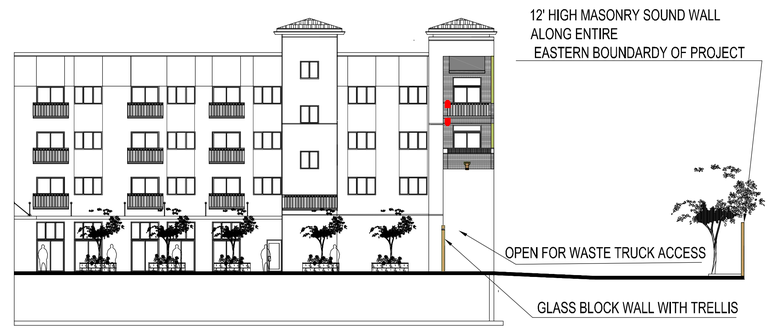




ELEVATIONS OF COURT YARD "B" (SOUTH MAIN STREET SIDE)

1/16"=1'-0" | 1:12 | 1





ELEVATIONS OF COURTYARD "C" (COSTA STREET SIDE)

1/16"=1'-0" | 1:12 | 2

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LIC.NO. C017234
EXP. 1/31/2015
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PHASE ONE SENIOR HOUSING

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Milpitas, California

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VESTING TENTATIVE
TRACT MAP
TP-14-0001

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SUBMITTALS / REVISIONS

MARK	DESCRIPTION	DATE
	SITE DEVELOPMENT PLAN Resubmittal #1 VESTING TENTATIVE TRACT MAP Resubmittal #1	7-1-14

KEY PLAN: NTS

COURTYARDS
"B" & "C"
SHEET DESCRIPTION

NORTH

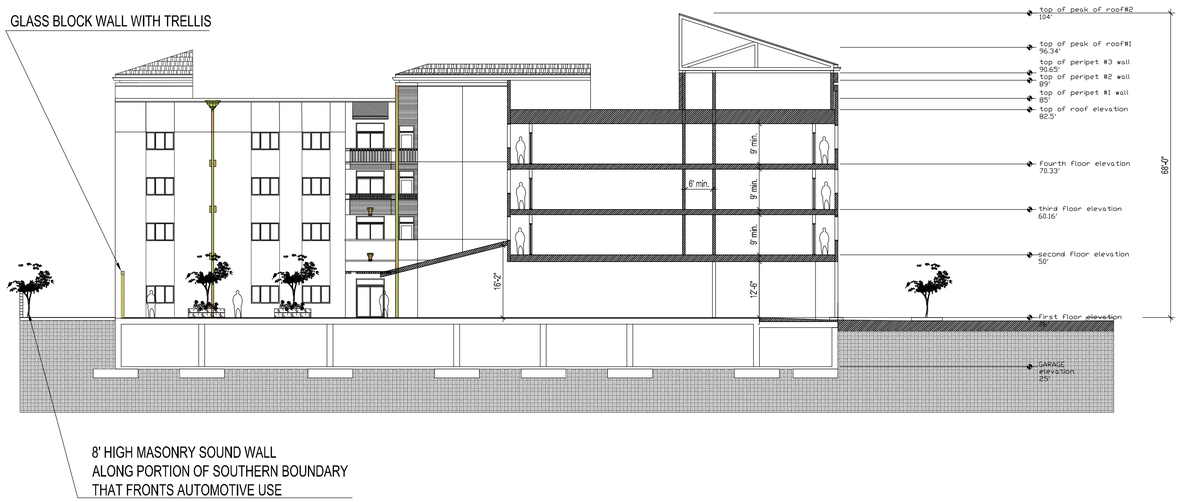
SCALE: AS NOTED

DRWN: JRB
APPRV'D:

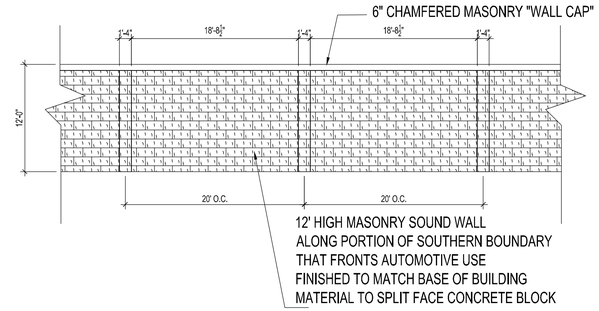
CDA FILE PATH:

29003
CDA PROJECT NO.

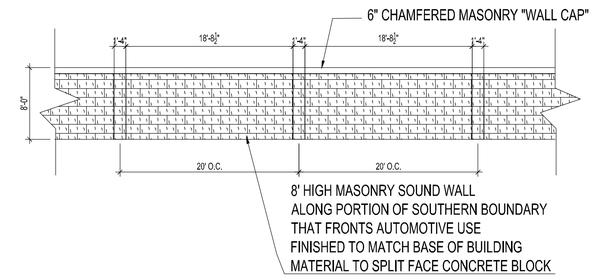
A3.3
21 OF 34
SHEET NO.



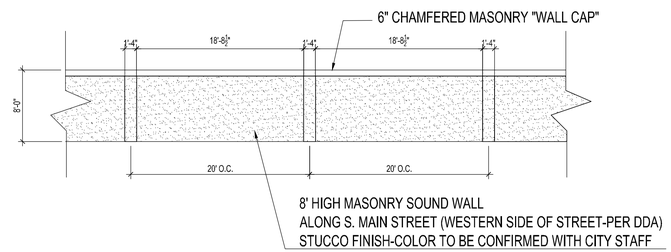
COURTYARD "A" WEST WALL FACING EAST | 1/16"=1'-0" | 1:12 | 3



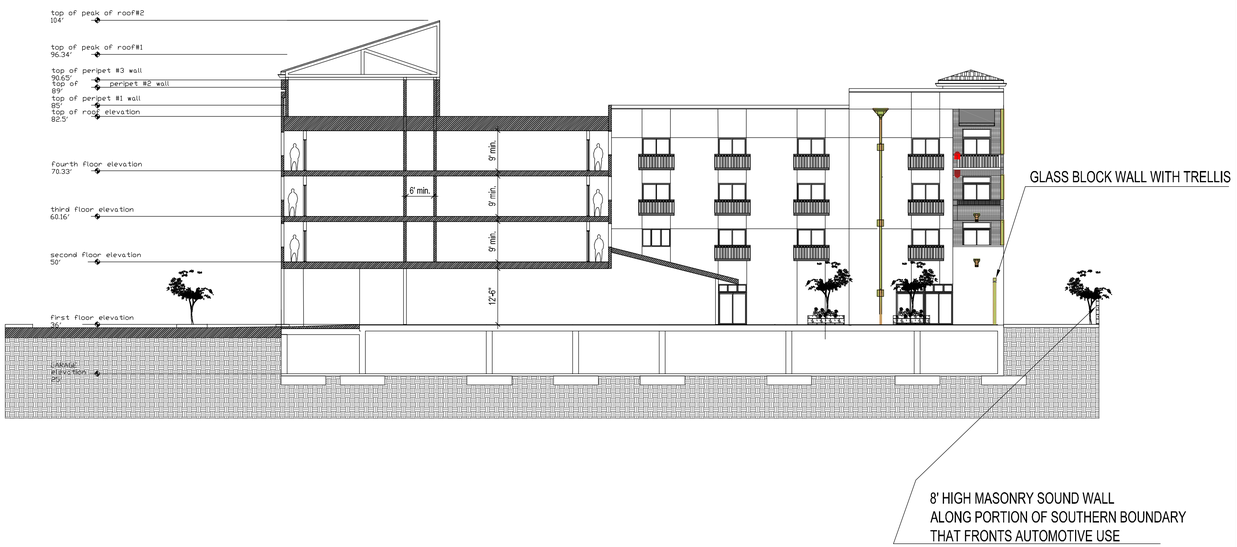
SOUND WALL ALONG EAST PROPERTY LINE | 1/8"=1'-0" | 1:12 | 1



SOUND WALL @ SOUTH PROPERTY LINE FROM S. MAIN ST. TO APPROXIMATELY 265 ' EASTERLY | 1/8"=1'-0" | 1:12 | 2



SOUND WALL @ S. MAIN ST. (WEST SIDE OF STREET-PER DDA) | 1"=1'-0" | 1:12 | 4



COURTYARD "A" EAST WALL FACING WEST | 1/16"=1'-0" | 1:12 | 6

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REGISTERED ARCHITECT
JAMES R. BURNS, II
LIC.NO. C017234
EXP. 1/31/2015
STATE OF CALIFORNIA

CONSULTANT'S STAMP

Project Description

SOUTH MAIN
SENIOR LIFESTYLES LLC
PHASE ONE SENIOR HOUSING

1504-1620
South Main Street
Milpitas, California

SITE DEVELOPMENT PLAN
SD14-0006
VESTING TENTATIVE
TRACT MAP
TP-14-0001

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SUBMITTALS / REVISIONS

MARK	DESCRIPTION	DATE
	SITE DEVELOPMENT PLAN Resubmittal #1 VESTING TENTATIVE TRACT MAP Resubmittal #1	7-1-14

KEY PLAN: NTS

COURTYARD "A"
& SOUND WALLS
SHEET DESCRIPTION

NORTH

SCALE: AS NOTED

DRWN: JRB
APPRV'D:

CDA FILE PATH:

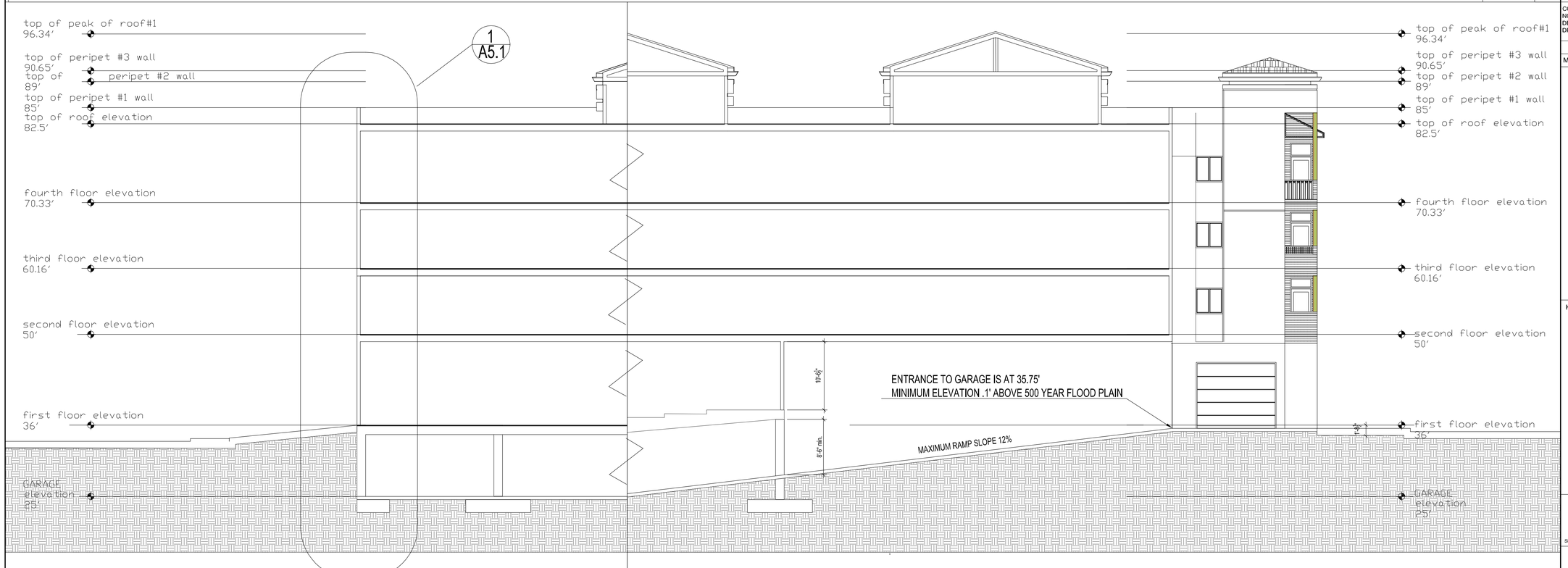
29003
CDA PROJECT NO.

A3.4
22 OF 34
SHEET NO.

<DETAIL NAME> | 1"=1'-0" | 1:12 | 5

BUILDING SECTION WEST TO EAST - RAMP AND POOL AREA

1/16"=1'-0"
1:12
1



BUILDING SECTION THROUGH TYPICAL WALL CONDITION

1/8"=1'-0"
1:12
3

BUILDING SECTION THROUGH RAMP

1/8"=1'-0"
1:12
2

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EXP. 1/31/2015
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SENIOR LIFESTYLES LLC
PHASE ONE SENIOR HOUSING

1504-1620
South Main Street
Milpitas, California

SITE DEVELOPMENT PLAN
SD14-0006
VESTING TENTATIVE
TRACT MAP
TP-14-0001

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SUBMITTALS / REVISIONS

MARK	DESCRIPTION	DATE
	SITE DEVELOPMENT PLAN Resubmittal #1 VESTING TENTATIVE TRACT MAP Resubmittal #1	7-1-14

KEY PLAN: NTS

WEST TO EAST
SECTION "RAMP"
SHEET DESCRIPTION

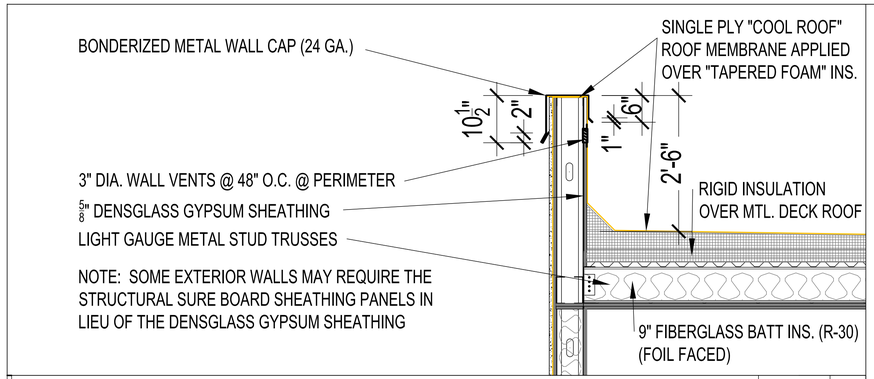
NORTH

SCALE: AS NOTED

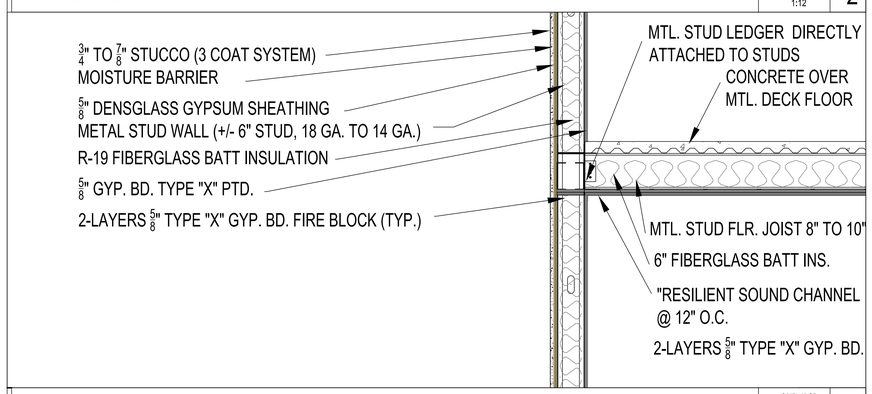
DRWN: JRB
APPRV'D:
29003
CDA PROJECT NO.

CDA FILE PATH:

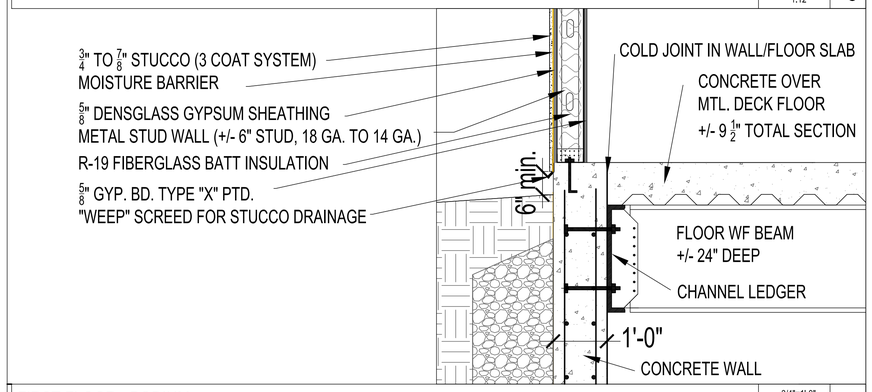
A3.5
23 OF 34
SHEET NO.



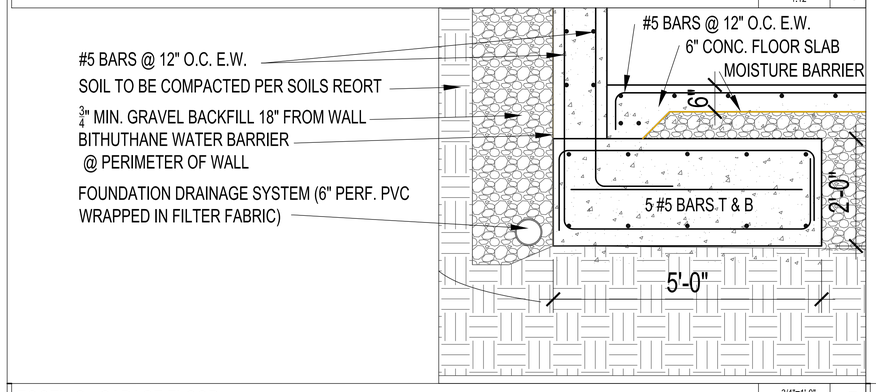
PARAPET - ROOF | 3/4"=1'-0" 1:12 | 2



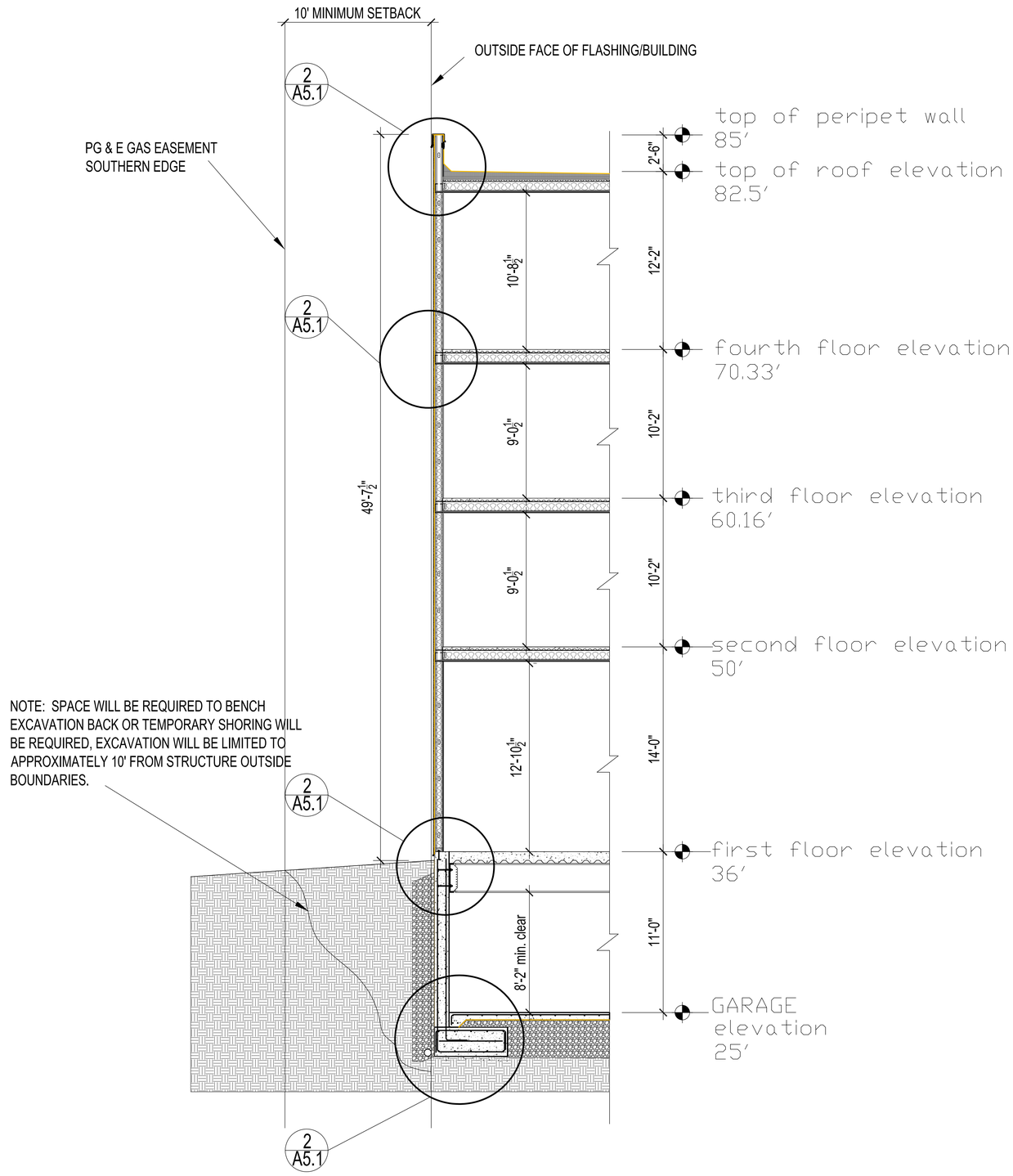
FLOOR - WALL CONNECTION | 3/4"=1'-0" 1:12 | 3



FIRST FLOOR - PODIUM | 3/4"=1'-0" 1:12 | 4



FOOTING - GARAGE FLOOR | 3/4"=1'-0" 1:12 | 5



NOTE: SPACE WILL BE REQUIRED TO BENCH EXCAVATION BACK OR TEMPORARY SHORING WILL BE REQUIRED, EXCAVATION WILL BE LIMITED TO APPROXIMATELY 10' FROM STRUCTURE OUTSIDE BOUNDARIES.

BUILDING WALL SECTION | 1/4"=1'-0" 1:12 | 1

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SUBMITTALS / REVISIONS

MARK	DESCRIPTION	DATE
	SITE DEVELOPMENT PLAN Resubmittal #1	7-1-14
	VESTING TENTATIVE TRACT MAP Resubmittal #1	

KEY PLAN: NTS

BUILDING WALL SECTION & DETAILS

SHEET DESCRIPTION

NORTH

SCALE: AS NOTED

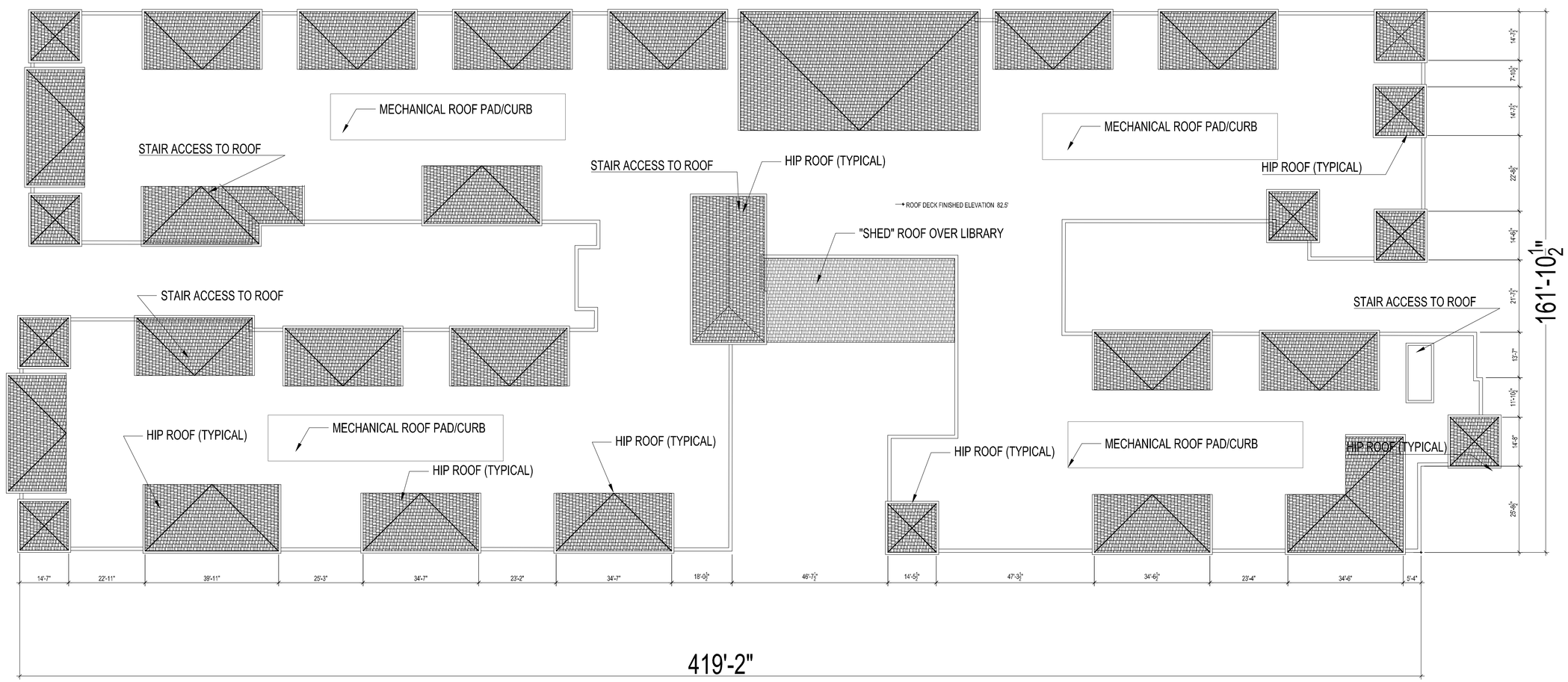
DRWN: JRB

APPRV'D:

CDA FILE PATH:

29003
CDA PROJECT NO.

A5.1
24 OF 34
SHEET NO.



ROOF PLAN

1/16"=1'-0"
1:12

1

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MARK	DESCRIPTION	DATE
	SITE DEVELOPMENT PLAN Resubmittal #1 VESTING TENTATIVE TRACT MAP Resubmittal #1	7-1-14

KEY PLAN: NTS

ROOF PLAN

SHEET DESCRIPTION

NORTH

SCALE: AS NOTED

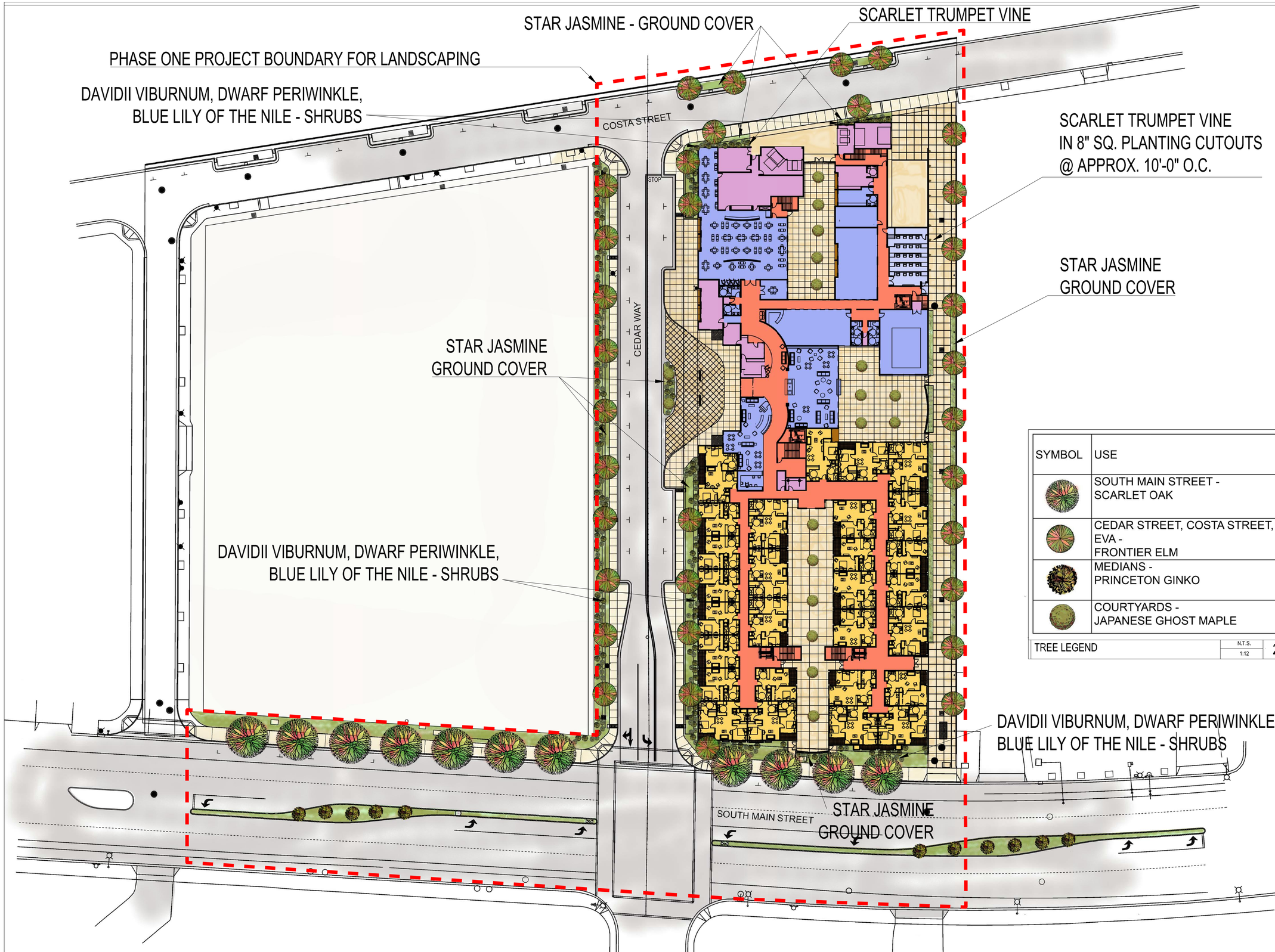
DRWN: JRB

APPRV'D:

CDA FILE PATH:

29003
CDA PROJECT NO.

A6.1
25 OF 34
SHEET NO.



SYMBOL	USE
	SOUTH MAIN STREET - SCARLET OAK
	CEDAR STREET, COSTA STREET, EVA - FRONTIER ELM
	MEDIANS - PRINCETON GINKO
	COURTYARDS - JAPANESE GHOST MAPLE

TREE LEGEND — N.T.S. — 1:12 — 2

LANDSCAPE PLAN — 1"=1'-0" — 1:12 — 1

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MARK	DESCRIPTION	DATE
	SITE DEVELOPMENT PLAN Resubmittal #1	7-1-14
	VESTING TENTATIVE TRACT MAP Resubmittal #1	

KEY PLAN: NTS

LANDSCAPE PLAN
PHASE ONE

SHEET DESCRIPTION

NORTH reference

SCALE: AS NOTED

DRWN: JRB

APPRV'D:

CDA FILE PATH:

29003
CDA PROJECT NO.

L1.1
26 OF 34
SHEET NO.

VIBURNUM DAVIDII | N.T.S. 1:12 | 5

TRACHELOSPERMUM JASMINOIDES | N.T.S. 1:12 | 6

AMBER GHOST JAPANESE MAPLE | N.T.S. 1:12 | 4

GINGKO BILOBA "PRINCETON SENTRY" | N.T.S. 1:12 | 3

ULMUS AMR. 'FRONTIER' - FRONTIER ELM | N.T.S. 1:12 | 2

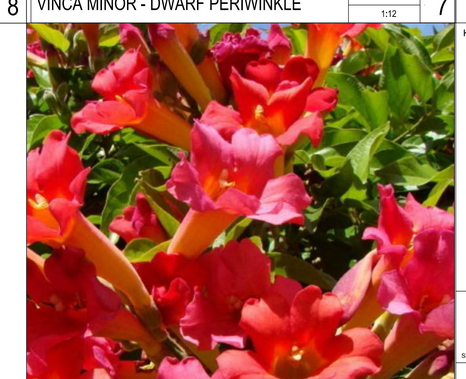
QUERCUS COCCIENA - SCARLET OAK | N.T.S. 1:12 | 1

PLANT MATERIAL		
TREES		
	QUERCUS COCCINEA	SCARLET OAK
	ULMUS AMERICANA 'FRONTIER'	FRONTIER ELM
	GINKO BILOBA	PRINCETON SENTRY GINGKO
	ACER PALMATUM 'AMBER GHOST'	AMBER GHOST JAPANESE MAPLE
VINES		
	DISTICTIS BUCCINATORIA	SCARLET TRUMPET VINE
SHRUBS		
	VIBURNUM DAVIDII	DAVIDII VIBURNUM
	VINCA MINOR	DWARF PERIWINKLE
	AGAPANTHUS AFRICANUS 'MIDNIGHT BLUE'	BLUE LILY OF THE NILE
GROUND COVER		
	TRACHELOSPERMUM JASMINOIDES	STAR JASMINE

PLANT MATERIAL | N.T.S. 1:12 | 10

AGAPANTHUS AFRICANUS 'MIDNT. BLUE' | N.T.S. 1:12 | 8

VINCA MINOR - DWARF PERIWINKLE | N.T.S. 1:12 | 7



DISTICTIS BUCCINATORIA | N.T.S. 1:12 | 89

COLLABORATIVE DESIGN ARCHITECTS INC

Oakland, CA

6114 LaSalle Avenue
Oakland

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TEL 510 339-8880

FAX 510 339-1642

ARCHITECT'S STAMP

REGISTERED ARCHITECT
JAMES R. BURNS, II
LIC.NO. C017234
EXP. 1/31/2015
STATE OF CALIFORNIA

CONSULTANT'S STAMP

Project Description

SOUTH MAIN
SENIOR LIFESTYLES LLC
PHASE ONE SENIOR HOUSING
1504-1620
South Main Street
Milpitas, California

SITE DEVELOPMENT PLAN
SD14-0006
VESTING TENTATIVE
TRACT MAP
TP-14-0001

Owner / Applicant:

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SUBMITTALS / REVISIONS

MARK	DESCRIPTION	DATE
	SITE DEVELOPMENT PLAN Resubmittal #1 VESTING TENTATIVE TRACT MAP Resubmittal #1	7-1-14

KEY PLAN: NTS

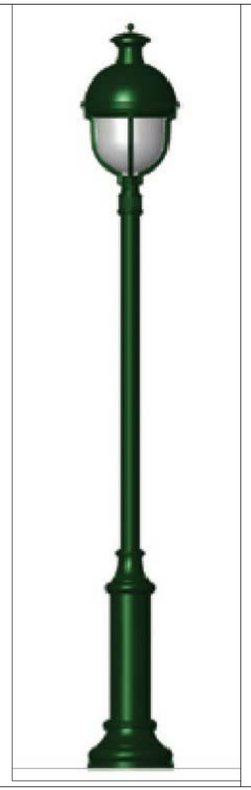
SHEET DESCRIPTION: LANDS. PLANT MATERIAL

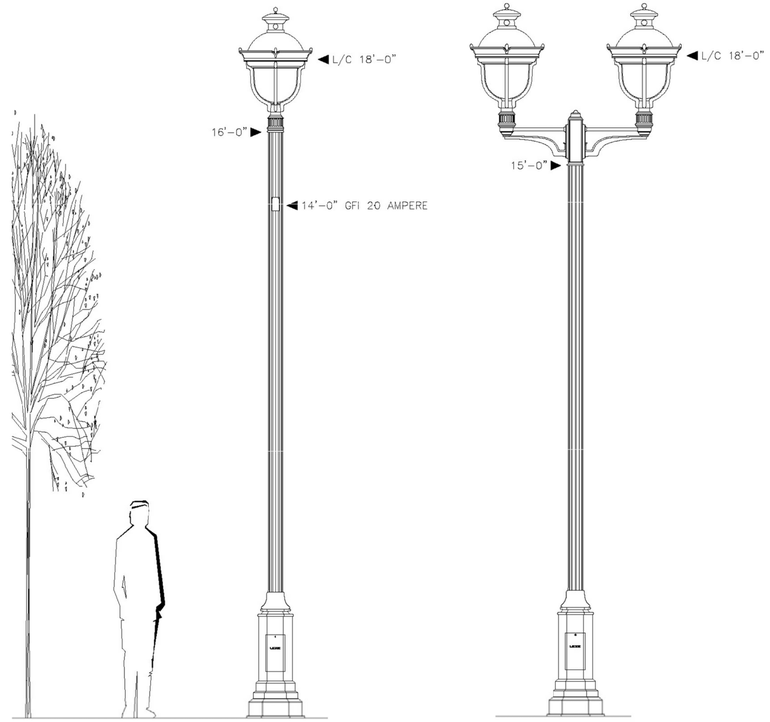
NORTH reference

SCALE: AS NOTED

DRWN: JRB
APPRV'D:
CDA FILE PATH:
29003 CDA PROJECT NO.

L1.1a
27 OF 34
SHEET NO.

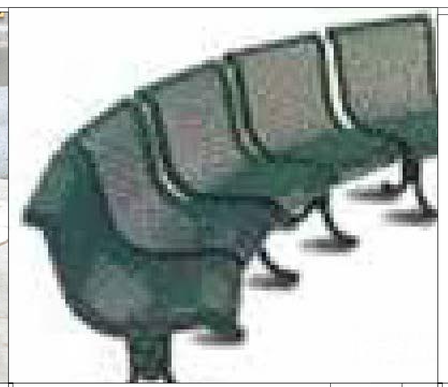




ANCESTRA LIGHT FIXTURE | N.T.S. 1:12 | 2

DAYTECH BUS SHELTER | N.T.S. 1:12 | 1

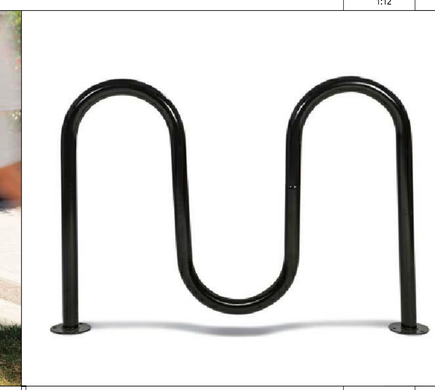
COLUMBIA CASCADE BOLLARDS | N.T.S. 1:12 | 7



CONCAVE BENCH | N.T.S. 1:12 | 6

WABASH TRASH RECEPTACLE | N.T.S. 1:12 | 5

GARDCO BOLLARD FOR EVA | N.T.S. 1:12 | 4

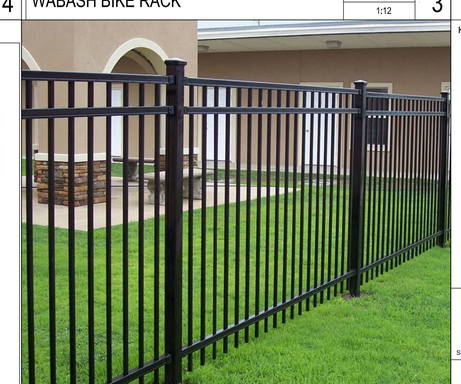


WABASH BIKE RACK | N.T.S. 1:12 | 3

STREET & SITE FURNISHINGS					
ELEMENT	DESCRIPTION AND COLOR	MANUFACTURER	ELEMENT	DESCRIPTION AND COLOR	MANUFACTURER
BUS SHELTER	BARREL ROOF TRANSIT SHELTER - CONTEMPORARY STYLE ACCO 4 X 12 HERITAGE CANTILEVERED DESIGN WITH BENCH. COLOR: BLACK	DAYTECH LIMITED	BOLLARDS	COLUMBIA CASCADE TIMBERFORM MODEL #2190-P, TIMBERFORM METAL BOLLARD, PEDASTAL MOUNT. STANDARD POWDER COAT COLOR:	COLUMBIA CASCADE TIMBERFORM
TRASH RECEPTACLE	FR400W - 32 GALLON RECEPTACLE, FLARE TOP, WELDED WIRE WITH FT100N -FLAT TOP LID - 14' DIA. OPENING; 32 GALLON LINER, LR105N SURFACE NOUNT POST PACKAGE. COLOR: BLACK	WABASH VALLEY	FENCING	WROUGHT IRON POWDERCOAT BLACK	LOCAL MANUFACTURER
CONCAVE BENCH	CL406P - 15 DEGREE W/BACK - S.M. - PERFORATED; A19 - 825 SEAT COLOR: CRANBERRY	WABASH VALLEY	BOLLARDS	BRM822 SCHOOL BOLLARD	GARDCO LIGHTING
STREET LIGHTING	AS SPECIFICED IN MAIN ST PLAN LINE STUDY	PHILIPS LUMEC	COURTYARD PLANTERS	TF4132 CONCRETE WETHERSTONE PROCELAIN, P2 FRENCH GRAY	WAUSAUTILE

STREET AND SITE FURNISHINGS | N.T.S. 1:12 | 10

WAUSAU TREE PLANTERS | N.T.S. 1:12 | 9



WROUGHT IRON FENCING | N.T.S. 1:12 | 8

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SD14-0006
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SUBMITTALS / REVISIONS

MARK	DESCRIPTION	DATE
	SITE DEVELOPMENT PLAN Resubmittal #1 VESTING TENTATIVE TRACT MAP Resubmittal #1	7-1-14

KEY PLAN: NTS

SITE FURNISHINGS
SHEET DESCRIPTION

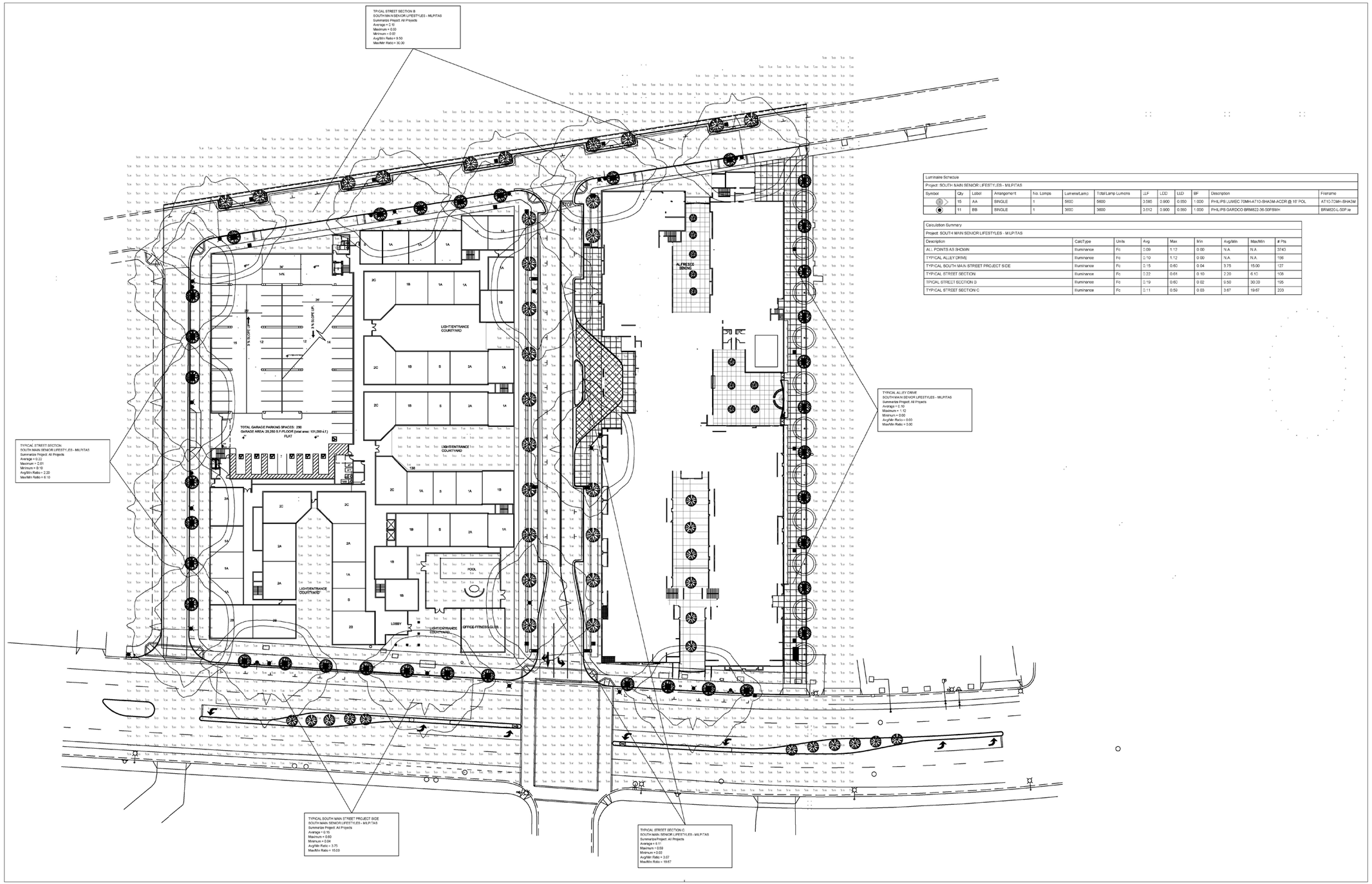
NORTH reference

SCALE: AS NOTED

DRWN: JRB
APPRV'D:
29003
CDA PROJECT NO.

CDA FILE PATH:

L1.2
28 OF 34
SHEET NO.



Luminaire Schedule

Project: SOUTH MAIN SENIOR LIFESTYLES - MILPITAS

Symbol	Qty	Label	Arrangement	No. Lamps	Lumens/Lamp	Total Lamp Lumens	LLF	LDD	LLD	BF	Description	Filename
	15	AA	SINGLE	1	5600	5600	0.585	0.900	0.850	1.000	PHILIPS LUMEC 70MH-AT10-SHA3M-ACCR @ 16' POL	AT10-70MH-SHA3M
	11	BB	SINGLE	1	3600	3600	0.612	0.900	0.850	1.000	PHILIPS GARDCO BRM823-36-50FSMH	BRM823-L-50F.ie

Calculation Summary

Project: SOUTH MAIN SENIOR LIFESTYLES - MILPITAS

Description	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	# Pts
ALL POINTS AS SHOWN	Illuminance	Fc	0.09	1.12	0.00	N.A.	N.A.	3743
TYPICAL ALLEY DRIVE	Illuminance	Fc	0.10	1.12	0.00	N.A.	N.A.	196
TYPICAL SOUTH MAIN STREET PROJECT SIDE	Illuminance	Fc	0.15	0.60	0.04	3.75	15.00	127
TYPICAL STREET SECTION	Illuminance	Fc	0.22	0.61	0.10	2.20	6.10	108
TPICAL STREET SECTION B	Illuminance	Fc	0.19	0.60	0.02	9.50	30.00	195
TYPICAL STREET SECTION C	Illuminance	Fc	0.11	0.59	0.03	3.67	19.67	203

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SENIOR LIFESTYLES LLC
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1504-1620
South Main Street
Milpitas, California

SITE DEVELOPMENT PLAN
SD14-0006
VESTING TENTATIVE
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MARK	DESCRIPTION	DATE
	SITE DEVELOPMENT PLAN Resubmittal #1 VESTING TENTATIVE TRACT MAP Resubmittal #1	7-1-14

KEY PLAN: NTS

SITE LIGHTING

SHEET DESCRIPTION

NORTH reference

SCALE: AS NOTED

DRWN: JRB

APPRV'D:

29003

CDA FILE PATH:

CDA PROJECT NO.

L1.3

29 OF 34

SHEET NO.

SITE LIGHTING

NTS

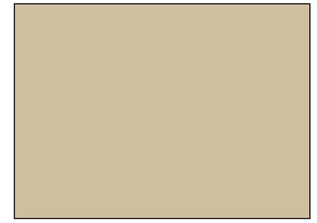
1:12

1

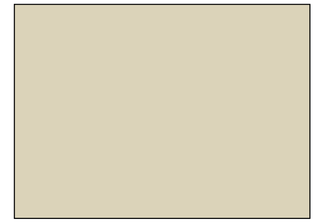
View from South Main Street

View from North West Corner of South Main Street and Cedar Way

C1
Benjamin Moore
2133-40 Dior Gray



C2
Benjamin Moore
HC-92 Wheeling Neutral

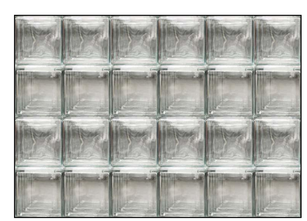


C3 Stone to Match
Benjamin Moore
HC-93 Carrington Beige

C4 HardiePlank
Countrylane Red

C5 Cloth Awnings to match
Benjamin Moore
2049-30 Teal Ocean

C6 Anodized Bronze to match
Anodized Aluminum Windows
Arcadia Champagne AB-2



C7
Glass Block

COLLABORATIVE DESIGN ARCHITECTS INC

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ARCHITECT'S STAMP

REGISTERED ARCHITECT
JAMES R. BURNS, III
LIC.NO. C017234
EXP. 1/31/2015
STATE OF CALIFORNIA

CONSULTANT'S STAMP

Project Description

SOUTH MAIN
SENIOR LIFESTYLES LLC
PHASE ONE SENIOR HOUSING

1504-1620
South Main Street
Milpitas, California

SITE DEVELOPMENT PLAN
SO14-0006
VESTING TENTATIVE
TRACT MAP
TP-14-0001

Owner / Applicant:

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SUBMITTALS / REVISIONS

MARK	DESCRIPTION	DATE
	SITE DEVELOPMENT PLAN Resubmittal #1 VESTING TENTATIVE TRACT MAP Resubmittal #1	7-1-14

KEY PLAN: NTS

COLOR & MATERIAL SELECTIONS

SHEET DESCRIPTION

NORTH

SCALE: AS NOTED

DRWN: JRB

APPRVD:

CDA PROJECT NO.: 29003

CDA FILE PATH:

C-M1.1

30 OF 34

SHEET NO.

NORTH WEST CORNER OF BUILDING FROM SOUTH MAIN STREET AND CEDAR WAY

NTS	2
1:12	

AERIAL VIEW FROM THE NORTH WEST CORNER OF THE SITE - SOUTH MAIN STREET AND CEDAR WAY

NTS	3
1:12	

AERIAL VIEW FROM SOUTH MAIN STREET DIRECTLY IN FRONT OF BUILDING

NTS	2
1:12	

<DETAIL NAME>

1"=1'-0"	1
1:12	

EXTERIOR PERSPECTIVES OF PHASE ONE

NTS	5
1:12	

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ARCHITECT'S STAMP

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JAMES R. BURNS, II
LIC NO. C017234
EXP. 1/31/2015
STATE OF CALIFORNIA

CONSULTANT'S STAMP

Project Description

SOUTH MAIN
SENIOR LIFESTYLES LLC
PHASE ONE SENIOR HOUSING

1504-1620
South Main Street
Milpitas, California

SITE DEVELOPMENT PLAN
SD14-0006
VESTING TENTATIVE
TRACT MAP
TP-14-0001

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SUBMITTALS / REVISIONS

MARK	DESCRIPTION	DATE
	SITE DEVELOPMENT PLAN Resubmittal #1 VESTING TENTATIVE TRACT MAP Resubmittal #1	7-1-14

KEY PLAN: NTS

COLOR RENDERINGS

SHEET DESCRIPTION

NORTH

SCALE: AS NOTED

CDA FILE PATH:

DRWN: JRB

APPRV'D:

29003
CDA PROJECT NO.

C-M1.2

31 OF 34

SHEET NO.

SOUTH WEST CORNER OF BUILDING FROM SOUTH MAIN STREET

NTS	2
1:12	

AERIAL VIEW FROM THE SOUTH WEST CORNER OF THE SITE

NTS	3
1:12	

AERIAL VIEW FROM THE "EVA" DIRECTLY IN FRONT OF COURTYARD "A'

NTS	2
1:12	

<DETAIL NAME>

1"=1'-0"	1
1:12	

EXTERIOR PERSPECTIVE OF PHASE ONE

1"=1'-0"	#
1:12	

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SUBMITTALS / REVISIONS

MARK	DESCRIPTION	DATE
	SITE DEVELOPMENT PLAN Resubmittal #1 VESTING TENTATIVE TRACT MAP Resubmittal #1	7-1-14

KEY PLAN: NTS

COLOR RENDERINGS

SHEET DESCRIPTION

NORTH

SCALE: AS NOTED

DRWN: JRB

APPRV'D:

CDA FILE PATH:

29003
CDA PROJECT NO.

C-M1.3

32 OF 34
SHEET NO.

SOUTH EAST CORNER OF BUILDING FROM COSTA STREET

NTS	2
1:12	

AERIAL VIEW FROM THE EAST ON COSTA STREET

NTS	4
1:12	

<DETAIL NAME>

1"=1'-0"	1
1:12	

DETAIL

1/4"=1'-0"	2
1:12	

COLLABORATIVE DESIGN ARCHITECTS INC

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SUBMITTALS / REVISIONS

MARK	DESCRIPTION	DATE
	SITE DEVELOPMENT PLAN Resubmittal #1 VESTING TENTATIVE TRACT MAP Resubmittal #1	7-1-14

KEY PLAN: NTS

COLOR RENDERINGS

SHEET DESCRIPTION

NORTH

SCALE: AS NOTED

CDA FILE PATH:

DRWN: JRB
APPRV'D:
29003
CDA PROJECT NO.

C-M1.4
33 OF 34
SHEET NO.

NORTH EAST CORNER OF BUILDING FROM COSTA STREET

NTS	2
1:12	

FACE OF BUILDING AT "PORTE COCHERE" FROM CEDAR WAY

1"=1'-0"	4
1:12	

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MARK	DESCRIPTION	DATE
	SITE DEVELOPMENT PLAN Resubmittal #1 VESTING TENTATIVE TRACT MAP Resubmittal #1	7-1-14

KEY PLAN: NTS

COLOR RENDERINGS

SHEET DESCRIPTION

NORTH

SCALE: AS NOTED

CDA FILE PATH:

DRWN: JRB

APPRV'D:

29003
CDA PROJECT NO.

C-M1.5

34 OF 34

SHEET NO.

<DETAIL NAME>

1"=1'-0"	1
1:12	

<DETAIL NAME>

1"=1'-0"	3
1:12	

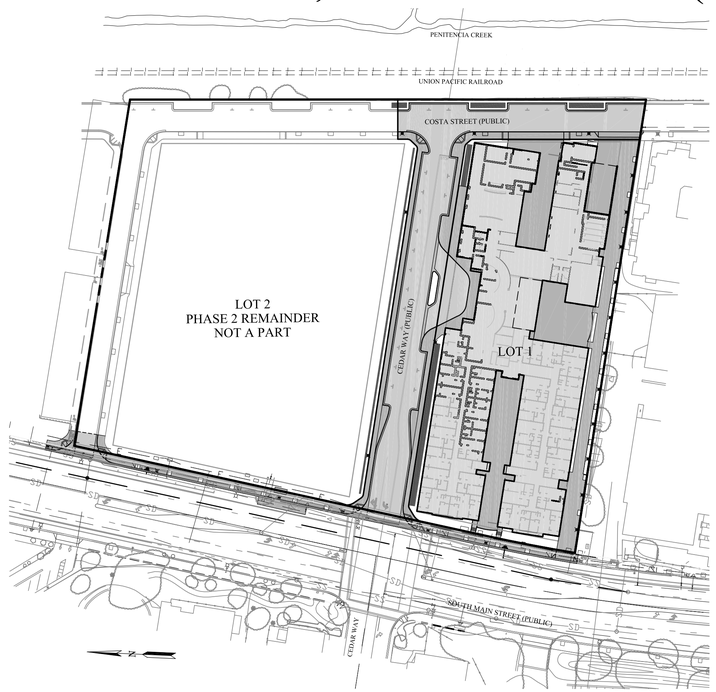
VESTING TENTATIVE MAP
SOUTH MAIN SENIOR LIFESTYLES PHASE 1
MILPITAS, CALIFORNIA (P-TP14-003)

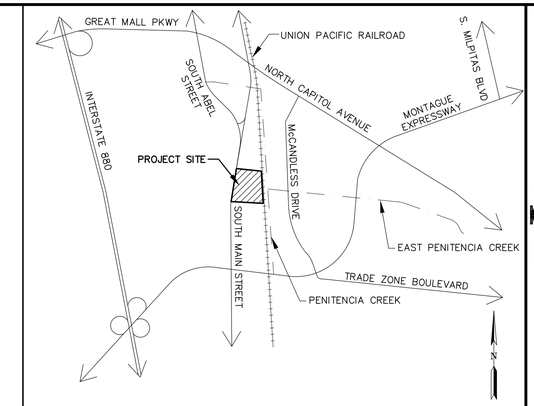
OWNER/DEVELOPER:
SOUTH MAIN SENIOR LIFESTYLES, LLC
5674 STONERIDGE DRIVE, SUITE 212
PLEASANTON, CA 94588
925-463-9205

SUBDIVIDER
BAYSHORE DEVELOPMENTS, LLC
5674 STONERIDGE DRIVE, SUITE 212
PLEASANTON, CA 94588
925-463-9205

CIVIL ENGINEER:
RUGGERI-JENSEN-AZAR & ASSOCIATES
8055 CAMINO ARROYO
GILROY, CA 95020
408-848-0300

ARCHITECTS:
COLLABORATIVE DESIGN ARCHITECTS, INC
6114 LA SALLE AVENUE
OAKLAND, CA 94611
510-339-8880





VICINITY MAP
NOT TO SCALE

SITE DATA

1. PROPERTY ADDRESS:
   1504, 1556, 1602, 1618, &1620 SOUTH MAIN STREET
   MILPITAS, CA
2. ASSESSOR PARCEL NUMBER:
   APN: 086-22-027 APN: 086-22-028 APN: 086-22-033
   APN: 086-22-034 APN: 086-22-041 APN: 086-22-042
3. TOTAL EXISTING PARCELS: 6
4. EXISTING LAND USE: VACANT LAND
5. PROPOSED LAND USES: RESIDENTIAL GROUP R-2.1 (SENIOR HOUSING)
6. EXISTING ZONING: R4-VERY HIGH DENSITY
7. BUILDOUT TABULATION:

LOT 1 (PHASE 1):	1.98 AC
LOT 2 (PHASE 2 REMAINDER):	3.18 AC
PUBLIC STREETS:	0.79 AC
TOTAL AREA:	5.95 AC
TOTAL UNITS (PHASE 1):	199 DU
GROSS DENSITY (PHASE 1):	71.8 DU/AC
NET DENSITY (PHASE 1):	100.5 DU/AC

8. WATER:
   - CITY OF MILPITAS- SOUTH MAIN STREET, CEDAR WAY, AND COSTA STREET
   - PRIVATE- WITHIN RESIDENTIAL LOT
9. SEWER:
   - CITY OF MILPITAS- SOUTH MAIN STREET, CEDAR WAY, AND COSTA STREET
   - PRIVATE- WITHIN RESIDENTIAL LOT
10. STORM
    - CITY OF MILPITAS- SOUTH MAIN STREET, CEDAR WAY, AND COSTA STREET
    - PRIVATE- WITHIN RESIDENTIAL LOT
11. POST-CONSTURCTION STORMWATER BMPS
    - ALL BMPs WILL BE PRIVATE

GENERAL NOTES

1. THE PROJECT BENCHMARK IS THE SOUTHERLY DISK IN MONUMENT WELL AT THE INTERSECTION OF ABEL STREET AND CORNING AVENUE, ELEVATION = 17.124' NGVD29 (19.864' NAVD88) PROJECT ELEVATIONS ARE BASED ON NGVD29
2. THE CALCULATED GRID BEARING OF N39°43'13"W OF THE LINE BETWEEN THE FOUND MONUMENT AT THE INTERSECTION OF MONTAGUE EXPRESSWAY WITH CENTRE POINTE DRIVE AND THE FOUND MONUMENT AT THE INTERSECTION OF SOUTH ABEL STREET WITH WEST CURTIS AVENUE WAS USED FOR THE BASIS OF BEARINGS FOR THIS MAP. THESE MONUMENTS ARE SHOWN AS POINT NUMBERS "1008" AND "1011" ON THAT RECORD OF SURVEY FILED JUNE 26, 1996 IN BOOK 678 OF MAPS, AT PAGES 10 THROUGH 13, RECORDS OF SANTA CLARA COUNTY, CALIFORNIA. THE BEARING WAS CALCULATED FROM THE COORDINATE VALUES FROM EPOCH 1986 SHOWN ON SHEET 4 OF 4 OF THAT SURVEY. THE VALUES OF POINTS "1008" AND "1011" ARE AS FOLLOWS:

	NORTHING	EASTING
"1008"	1974285.72	6156434.98
"1011"	1977865.34	6153460.98

3. CEDAR WAY AND COSTA STREET WILL BE PUBLIC.
4. THERE ARE NO EXISTING WELLS ON SITE.
5. STREET LIGHTS ON PUBLIC STREETS WILL BE CONSTRUCTED TO THE CITY STANDARDS AND DEDICATED TO THE CITY.
6. LIGHTS ON PRIVATE LOTS WILL BE MAINTAINED BY THE HOMEOWNERS' ASSOCIATION.
7. PER THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) NUMBER 06085C0067J, DATED FEBRUARY 19, 2014, THE PROJECT SITE IS LOCATED IN ZONE X. ZONE X IS DEFINED AS, "AREAS OF 0.2% CHANCE FLOOD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD."
8. PROPOSED GRADES AS SHOWN ARE CONCEPTUAL. FINISH GRADING IS SUBJECT TO FINAL DESIGN, SUBJECT TO SITE SPECIFIC FLOOD STUDY, AND MAY VARY AT FINAL DESIGN.
9. ALL GRADING SHALL BE DONE IN ACCORDANCE WITH THE RECOMMENDATIONS AND CONDITIONS OF THE GEOTECHNICAL ENGINEER AND SUPPLEMENTAL REPORTS REGARDING THIS PROJECT.
10. ALL EROSION CONTROL MEASURES SHALL BE DONE IN CONFORMANCE WITH THE CRITERIA AND STANDARDS OF THE CITY OF MILPITAS.
11. THE EXISTING TOPOGRAPHY IS BASED ON AN AERIAL SURVEY RECEIVED FROM AEROGEODETIC, DATED JANUARY 2010 THE CONTOURS SHOWN ON THIS PLAN REPRESENT GROUND ELEVATIONS, AS DETERMINED AT THE TIME OF SAID SURVEY. EXISTING SURFACE IMPROVEMENTS DEPICTED ON THE TOPOGRAPHIC MAP MAY DIFFER FROM CURRENT SITE CONDITIONS AS CONSTRUCTION ACTIVITIES ON THE SITE ARE ON-GOING.
12. COMMON OPEN SPACE PARCELS AND PRIVATE DRIVE PARCELS MAY BE SPLIT INTO ADDITIONAL PARCELS AS PART OF FINAL MAP AND BASED ON FINAL CONSTRUCTION PHASING.
13. PRELIMINARY ARCHITECTURE SHOWN IS FOR REFERENCE PURPOSES ONLY AND IS SUBJECT TO CHANGE.
14. GAS & ELECTRIC: PG&E
15. TELEPHONE: AT & T
16. CABLE TELEVISION: COMCAST
17. RETAINING WALLS: ALL WALLS WILL BE PRIVATE FACILITIES & MAINTAINED BY HOMEOWNERS' ASSOCIATION. ALL WALL HEIGHTS ARE APPROXIMATE AND MAY BE SUBJECT TO CHANGE AT FINAL DESIGN.
18. ALL LANDSCAPING & COMMON AREAS ARE PRIVATELY OWNED & MAINTAINED BY HOMEOWNERS' ASSOCIATION.
19. LOT NUMBERS SHOWN ARE FOR IDENTIFICATION PURPOSES ONLY AND ARE NOT INTENDED TO BE FINAL.
20. PAVING OF STREETS, DRIVEWAYS, AND NON-STRUCTURAL CONCRETE FLAT WORK SHALL CONFORM TO 2011 MILPITAS MUNICIPAL CODE SECTIONS II-13-18 & II-13-17.05 RESPECTABLY, INCLUDING TRAFFIC INDEX PER CITY DESIGN STANDARDS.

ABBREVIATIONS:

AC	ACRES
APN	ASSESSOR'S PARCEL NUMBER
BC	BACK OF CURB
BFE	BASE FLOOD ELEVATION
BNDY	BOUNDARY
CB	STORM DRAIN CATCH BASIN
CL or C	CENTERLINE
DWY	DRIVEWAY
ELECT	ELECTROLIER
ESMT	EASEMENT
EVAE	EMERGENCY VEHICLE ACCESS EASEMENT
EX	EXISTING
FDC	FIRE DEPARTMENT CONNECTION
FOC	FACE OF CURB
FFU	FINISHED FLOOR GROUND LEVEL
FG	FINISHED GRADE
FH	FIRE HYDRANT
G	GAS
GB	GRADE BREAK
HP	HIGH POINT
LP	LOW POINT
MAX	MAXIMUM
MH	MANHOLE
MIN	MINIMUM
PD	PROJECT DRIVEWAY
PIV	POST INDICATOR VALVE
PIWE	PRIVATE IRRIGATION WATERLINE EASEMENT
PL	PROPERTY LINE
PP	POWER POLE
PRUE	PRIVATE UTILITY EASEMENT
PUE	PUBLIC UTILITY EASEMENT
R/W	RIGHT OF WAY
RW	RECYCLED WATER
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SF	SQUARE FEET
SLD	SEE LANDSCAPE DRAWINGS
SS	SANITARY SEWER
SSMH	SANITARY SEWER MANHOLE
SWK	SIDEWALK

LEGEND

PROPOSED	DESCRIPTION	EXISTING
	CATCH BASIN	
	ELECTRIC	
	ELECTROLIER	
	CENTERLINE	
	EASEMENT	
	SITE	
	FIRE HYDRANT	
2%	FLOW DIRECTION	
1	LOT NUMBER	
	LOT LINE	
	MANHOLE	
	PROJECT BOUNDARY	
	RIGHT OF WAY	
SS	SANITARY SEWER	S
36.6 X	SPOT GRADE	36.6
SD	STORM DRAIN	D
W	WATER	W
	LIMIT OF BUILDING AT GROUND LEVEL	

SUBDIVISION TENTATIVE MAP

This Map has been reviewed by the City Engineer.

City Engineer Date

Recommended for Approval by the Milpitas Planning Commission, this _____ day of _____ 20_____ , and Approved by the Milpitas City Council this _____ day of _____ 20 _____.

Planning & Neighborhood Services Director Date

TABLE OF CONTENTS

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2	EXISTING SITE CONDITIONS
3	PROPOSED SITE PLAN
4	CONCEPTUAL CROSS SECTIONS
5	CONCEPTUAL GRADING & UTILITY PLAN
6	EMERGENCY VEHICLE TRAVEL PATHS
7	SOLID WASTE VEHICLE TRAVEL PATHS
8	CONCEPTUAL STORMWATER CONTROL PLAN
SWHP-1	SOLID WASTE MANAGEMENT PLAN
SWHP-2	SOLID WASTE MANAGEMENT PLAN
L1.1-L1.3	LANDSCAPE SHEETS

RUGGERI-JENSEN-AZAR
ENGINEERS • PLANNERS • SURVEYORS
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TITLE SHEET
SOUTH MAIN SENIOR LIFESTYLES PHASE 1
MILPITAS, CALIFORNIA

FOR:

SCALE NONE
DATE AUGUST 8, 2014

DATE	MK	SHEET REVISIONS	BY	CK

SHEET 1 OF 10 SHEETS

JOB NO. 092041

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EXISTING SITE CONDITIONS
SOUTH MAIN SENIOR LIFESTYLES PHASE 1
MILPITAS, CALIFORNIA

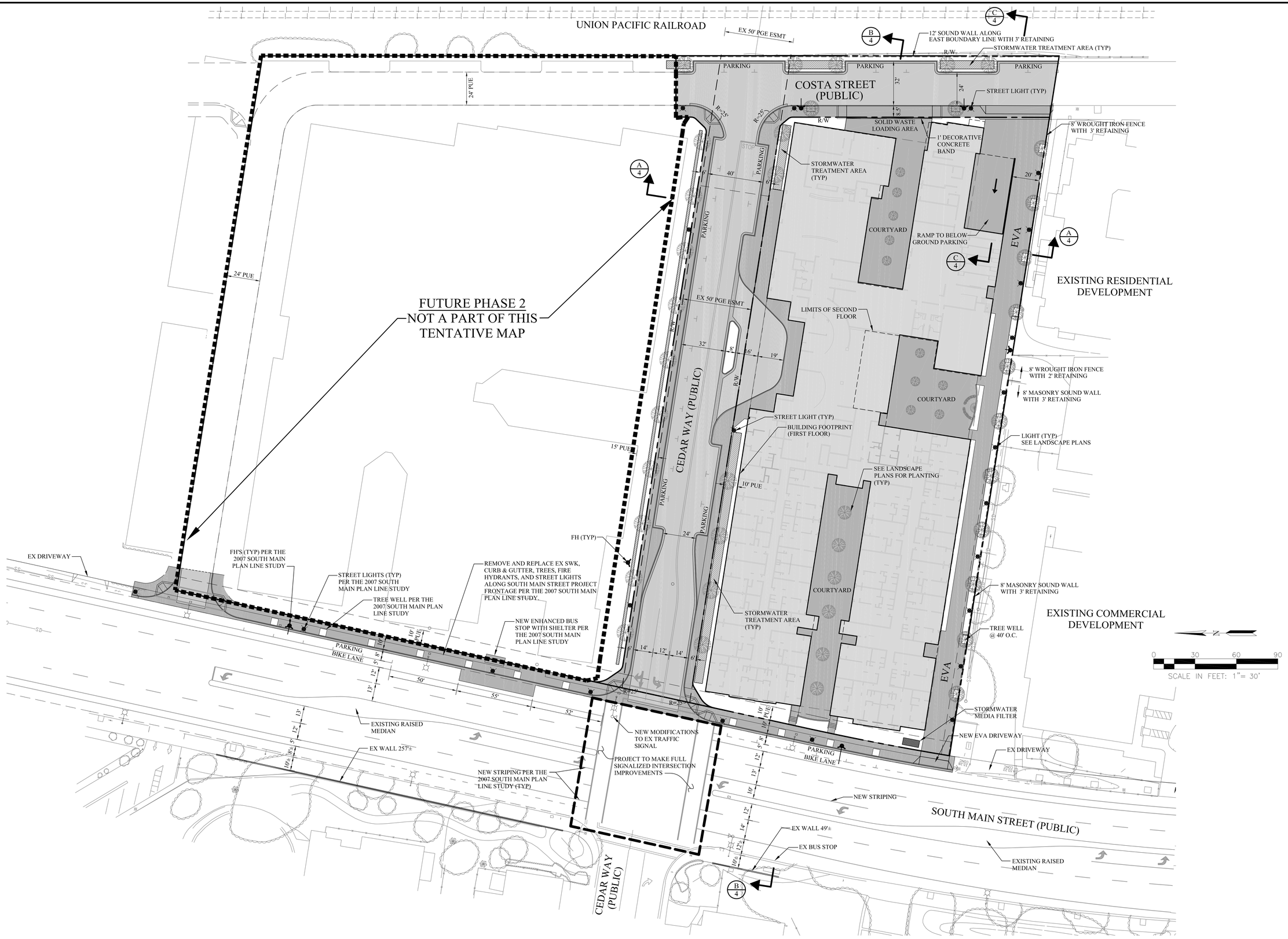
FOR:

SCALE	DATE
1"=30'	AUGUST 8, 2014

DATE	MK	SHEET REVISIONS	BY	CK

SHEET 2 OF 10 SHEETS

JOB NO. 092041



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PROPOSED SITE PLAN
SOUTH MAIN SENIOR LIFESTYLES PHASE 1
MILPITAS, CALIFORNIA

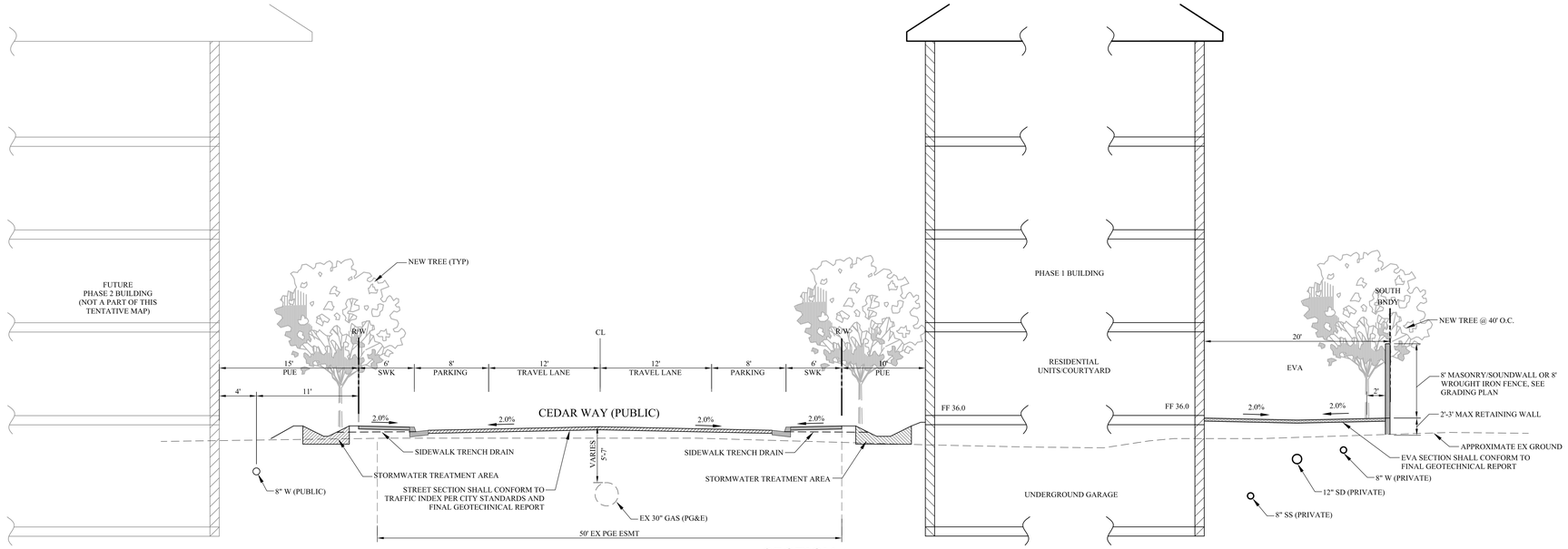
FOR:

SCALE	DATE
1"=30'	AUGUST 8, 2014

DATE	MK	SHEET REVISIONS	BY	CK

SHEET 3 OF 10 SHEETS

JOB NO. 092041



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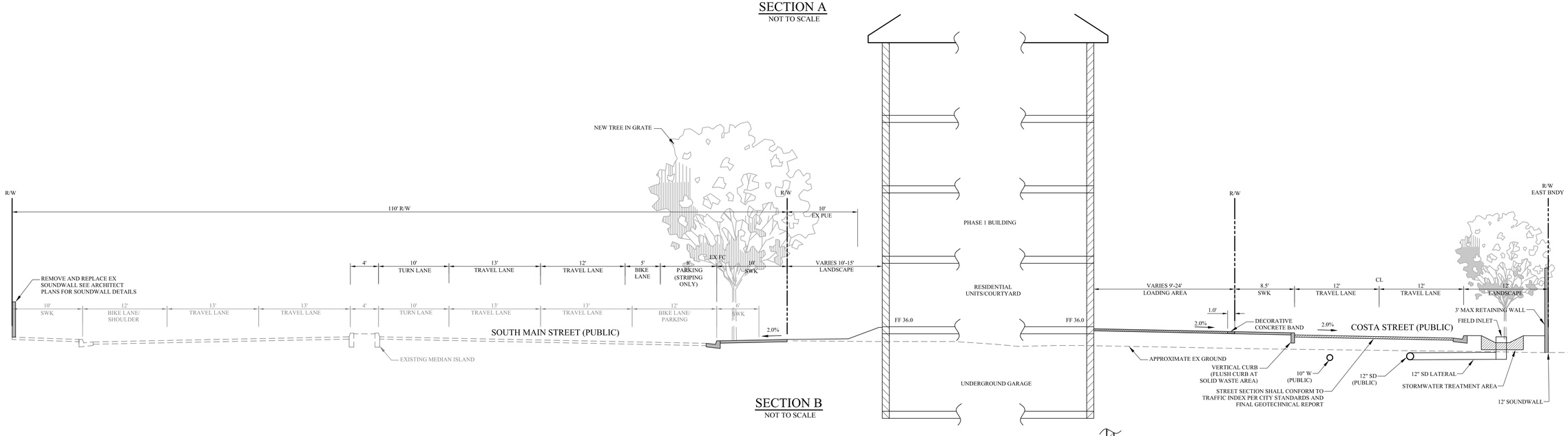

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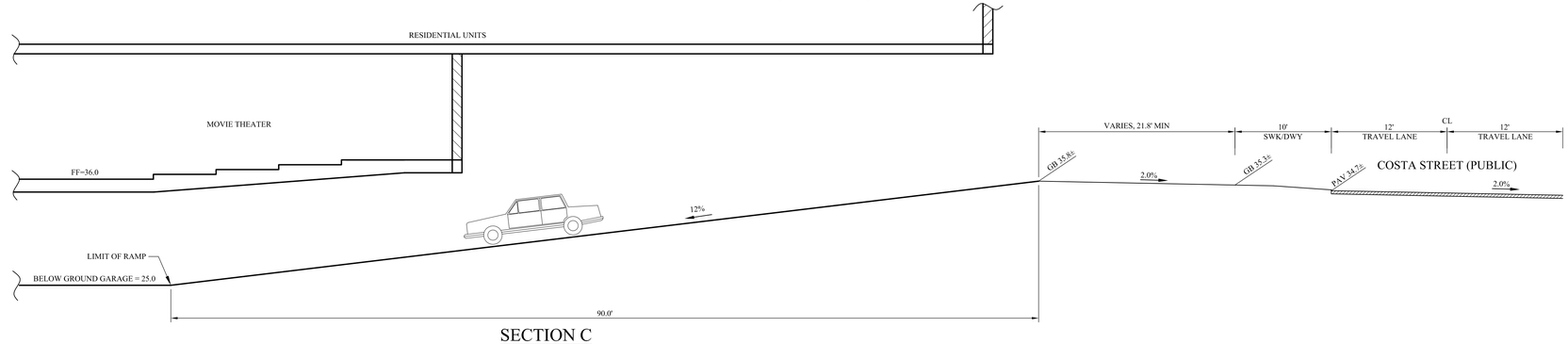

SECTION C
NOT TO SCALE

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CONCEPTUAL CROSS SECTIONS
SOUTH MAIN SENIOR LIFESTYLES PHASE 1
MILPITAS, CALIFORNIA

FOR:

SCALE	DATE
NONE	AUGUST 8, 2014

DATE	MK	SHEET REVISIONS	BY	CK

SHEET
4
OF 10 SHEETS

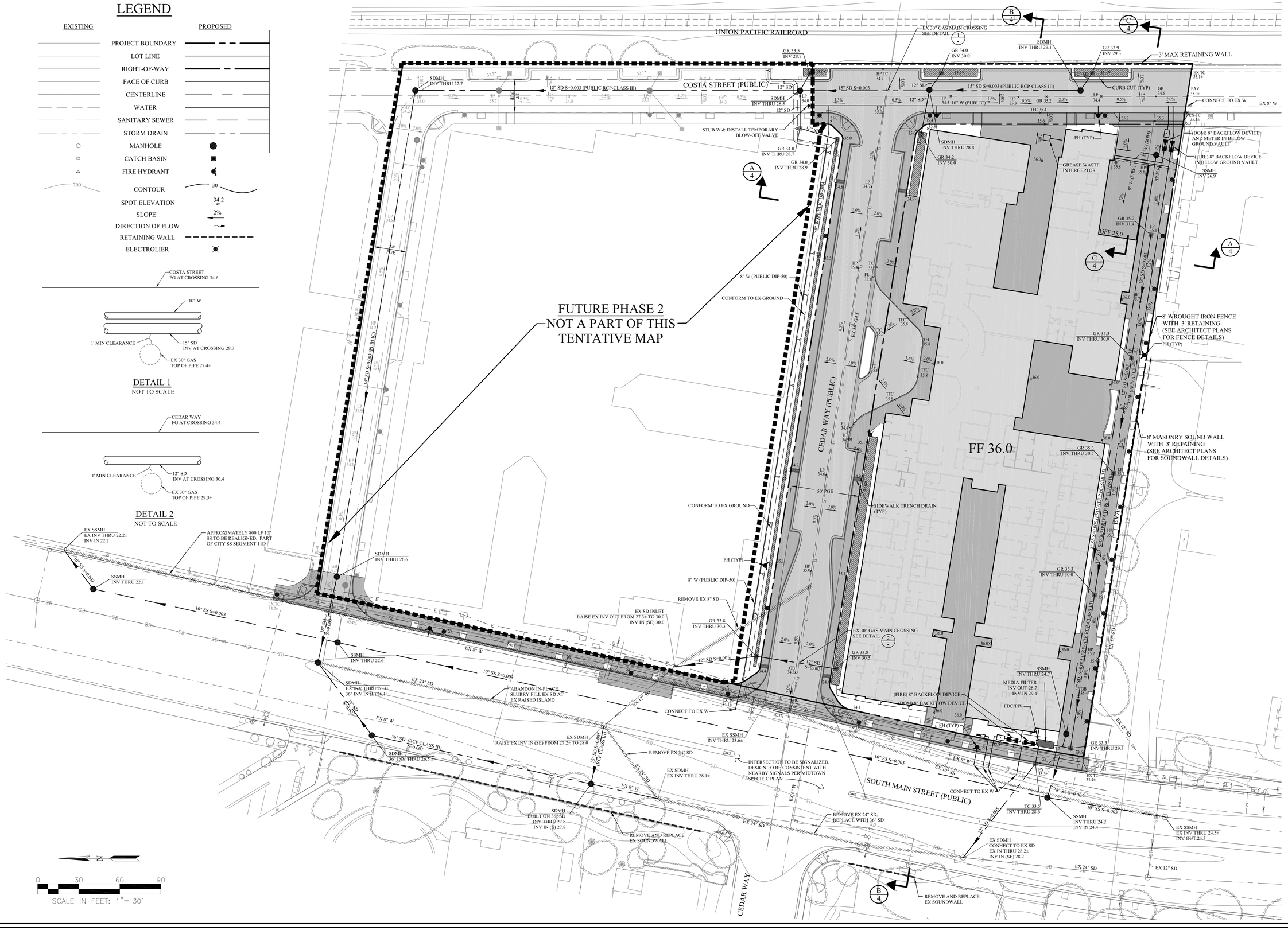
JOB NO.
092041

LEGEND

EXISTING		PROPOSED
	PROJECT BOUNDARY	
	LOT LINE	
	RIGHT-OF-WAY	
	FACE OF CURB	
	CENTERLINE	
	WATER	
	SANITARY SEWER	
	STORM DRAIN	
○	MANHOLE	●
▫	CATCH BASIN	■
	FIRE HYDRANT	
700	CONTOUR	30
	SPOT ELEVATION	34.2 ×
	SLOPE	2%
	DIRECTION OF FLOW	~
	RETAINING WALL	
	ELECTROLIER	

DETAIL 1
NOT TO SCALE

DETAIL 2
NOT TO SCALE



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CONCEPTUAL GRADING & UTILITY PLAN
SOUTH MAIN SENIOR LIFESTYLES PHASE 1
MILPITAS, CALIFORNIA

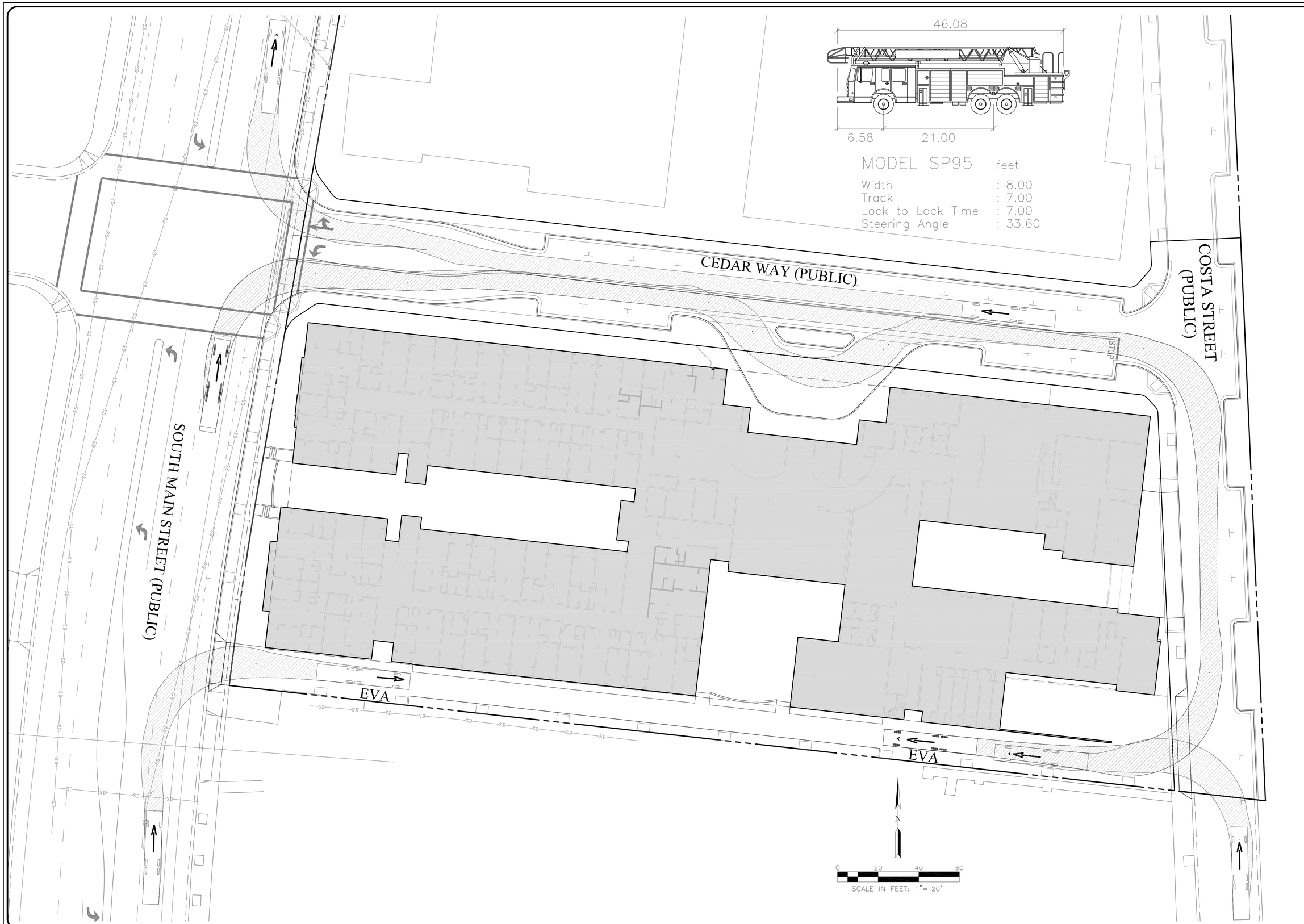
FOR:

SCALE	DATE
1"=30'	AUGUST 8, 2014

DATE	MK	SHEET REVISIONS	BY	CK

SHEET 5 OF 10 SHEETS

JOB NO. 092041



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EMERGENCY VEHICLE TRAVEL PATHS
SOUTH MAIN SENIOR LIFESTYLES PHASE 1
MILPITAS, CALIFORNIA

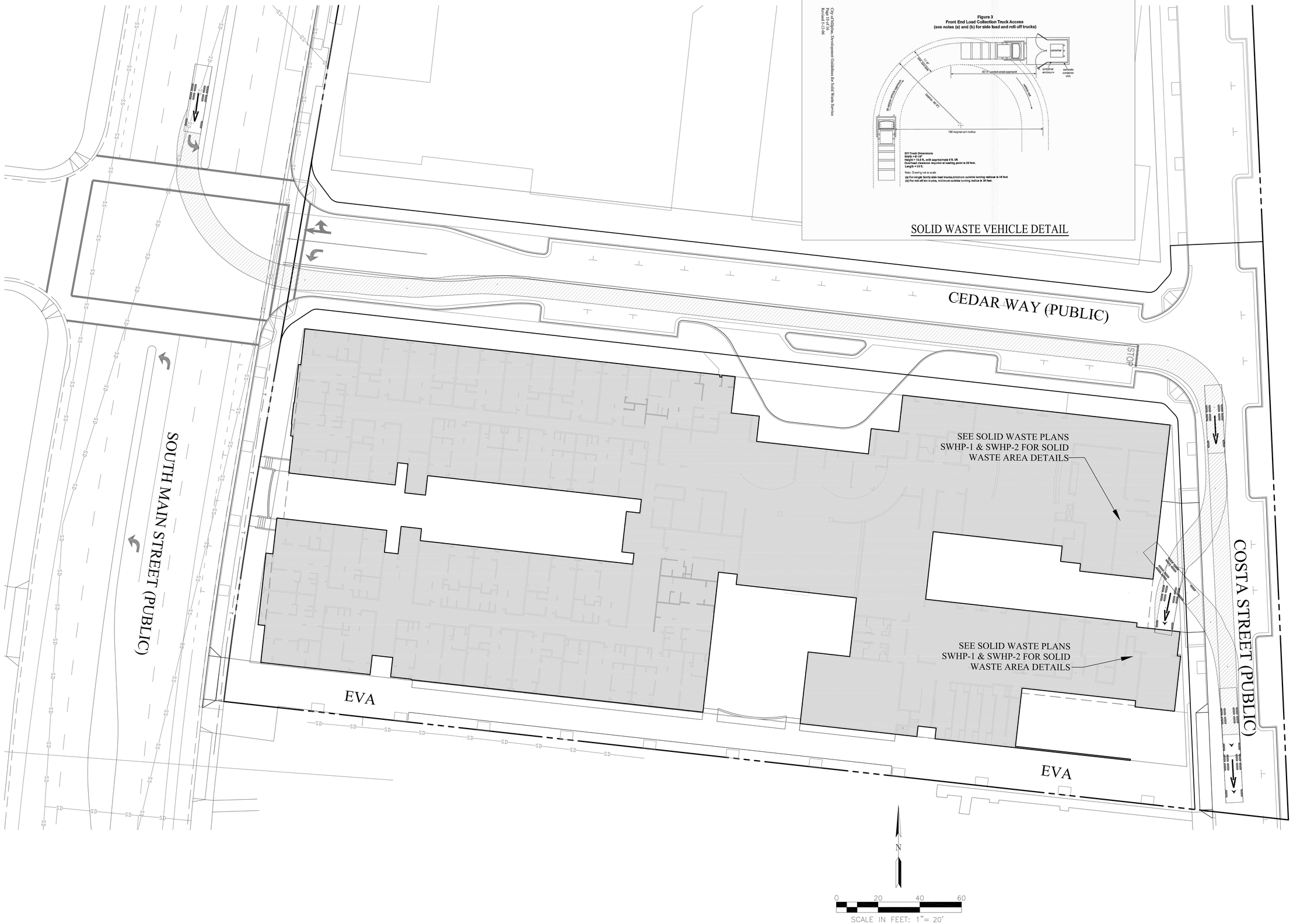
FOR:

SCALE	DATE
1"=20'	AUGUST 8, 2014

DATE	MK	SHEET REVISIONS	BY	CK

SHEET 6 OF 10 SHEETS

JOB NO. 092041



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SOLID WASTE VEHICLE TRAVEL PATHS
SOUTH MAIN SENIOR LIFESTYLES PHASE 1
MILPITAS, CALIFORNIA

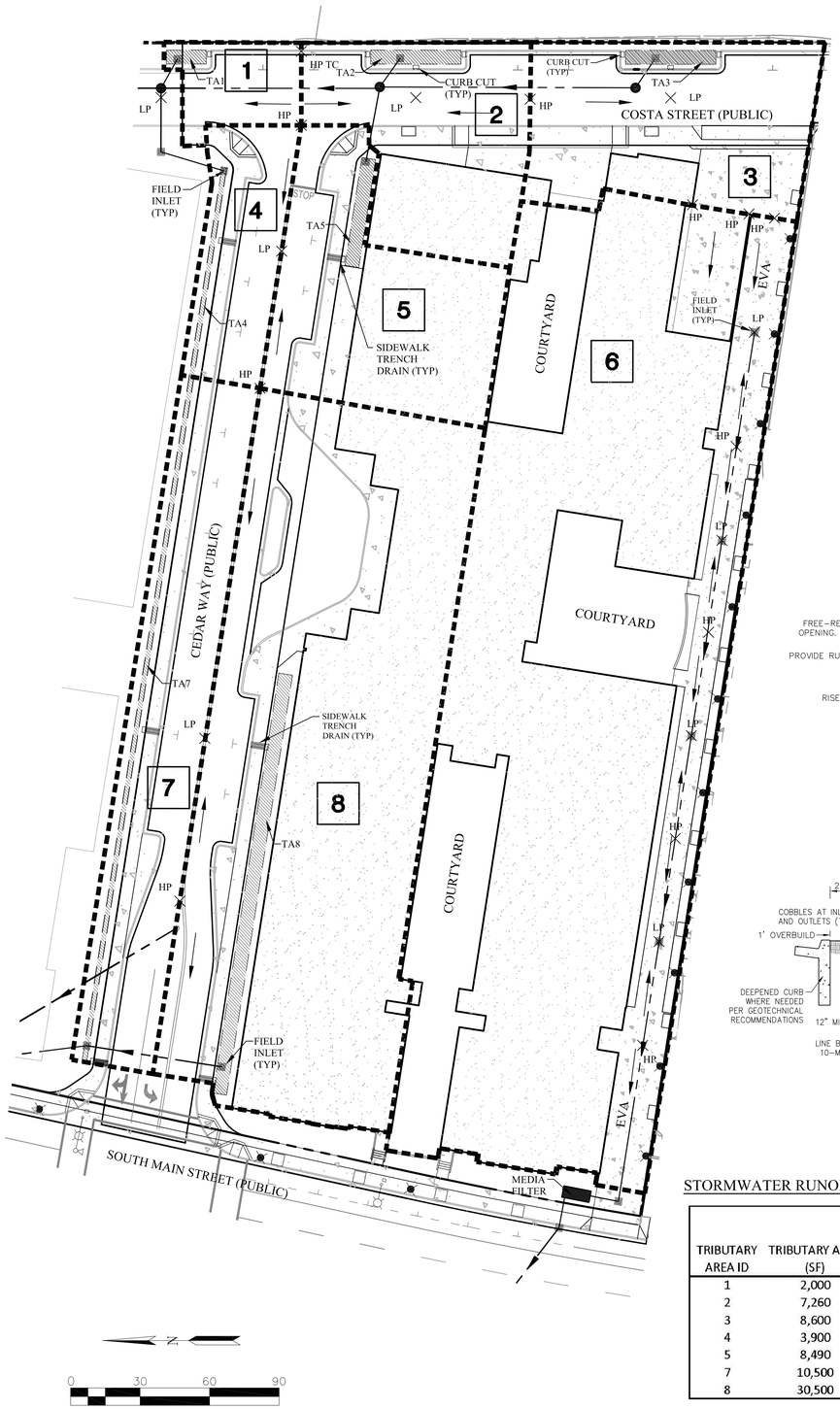
FOR:

SCALE	DATE
1"=20'	AUGUST 8, 2014

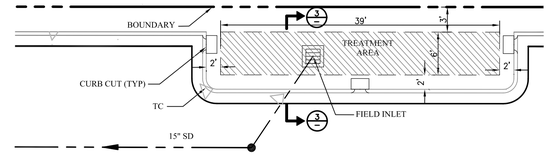
DATE	MK	SHEET REVISIONS	BY	CK

SHEET 7 OF 10 SHEETS

JOB NO. 092041



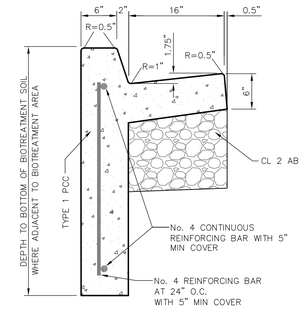
SCALE IN FEET: 1"= 30'



TYPICAL BIOTREAMENT AREA

SCALE: 1"=10'

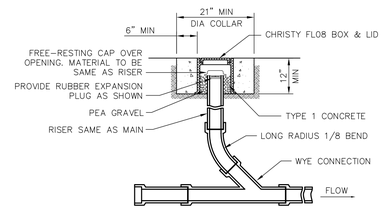
*TYPICAL FOR ALL BIOTREATMENT AREAS



1 DEEPENED CURB & GUTTER DETAIL*

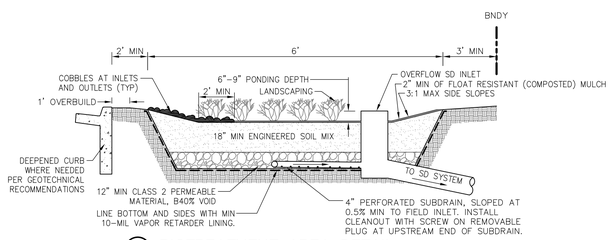
NO SCALE

*WHEREVER APPLICABLE PER GEOTECHNICAL RECOMMENDATIONS



2 CLEANOUT DETAIL

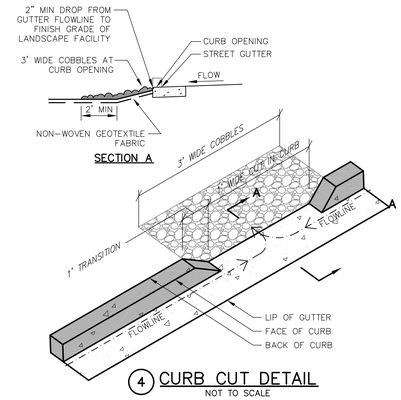
NO SCALE



3 BIOTREATMENT AREA DETAIL

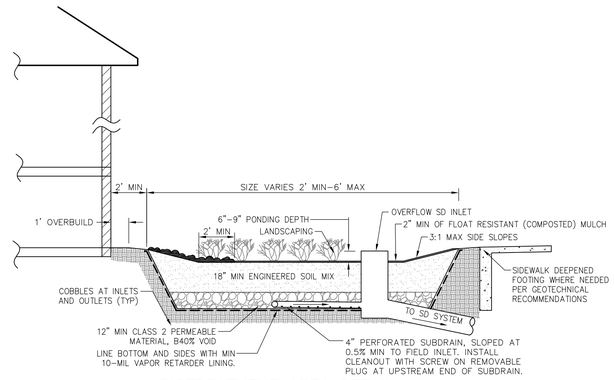
NO SCALE

NOTES:
1. BIORETENTION BASIN DESIGN IS BASED ON CRITERIA WITHIN SECTION 6.1 OF THE SCVURPPP "C.3 STORMWATER HANDBOOK" DATED APRIL 2012.



4 CURB CUT DETAIL

NOT TO SCALE



5 BIOTREATMENT AREA DETAIL

NO SCALE

NOTES:
1. BIORETENTION BASIN DESIGN IS BASED ON CRITERIA WITHIN SECTION 6.1 OF THE SCVURPPP "C.3 STORMWATER HANDBOOK" DATED APRIL 2012.

LEGEND

- TRIBUTARY AREA BOUNDARY
- XX — TRIBUTARY AREA ID
- TREATMENT AREA
- CURB CUT
- STORM DRAIN PIPE
- STORM DRAIN MANHOLE
- STORM DRAIN INLET
- TA(X) — TREATMENT AREA ID
- SIDEWALK TRENCH DRAIN
- BUILDING ROOF AREA
- CONCRETE/HARDSCAPE
- HP — HIGH POINT
- LP — LOW POINT
- FLOW DIRECTION

STORM WATER MANAGEMENT NOTES:

1. PROJECT DATA:

TOTAL PROJECT SITE AREA (PHASE 1):	120,660-SF (2.8-ACRES)
POST-PROJECT IMPERVIOUS AREA:	110,400-SF (91%)
MEAN ANNUAL PRECIPITATION:	14.5"
85% 24-HR RAINFALL DEPTH:	0.54"
85% HOURLY RAINFALL INTENSITY:	0.09 IN/HR
NRCS SOIL GROUP:	CLASS 'D' (CLAY)
SITE INFILTRATION RATE:	0.2 IN/HR*
DEPTH TO GROUNDWATER:	0-10 FEET*

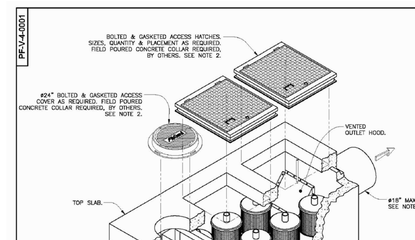
** SITE INFILTRATION RATE BASED ON NRCS DOCUMENTED SATURATED HYDRAULIC CONDUCTIVITY. DEPTH TO GROUNDWATER BASED ON SCVURPPP DOCUMENTED GROUNDWATER MAPS*

2. THIS PROJECT IS LOCATED IN THE SAN FRANCISCO REGIONAL WATER QUALITY CONTROL BOARD JURISDICTION. STORMWATER RUNOFF MANAGEMENT SHALL ADHERE TO PROVISION C.3 OF THE MUNICIPAL REGIONAL PERMIT ORDER RB2-2009-0074 ADOPTED OCTOBER 2009.
3. THIS STORM WATER RUNOFF MANAGEMENT PLAN IS CONCEPTUAL AND SUBJECT TO REVISION DURING FINAL DESIGN.
4. STORM WATER VOLUMETRIC BMP SIZING IS BASED ON THE 80% CAPTURE CURVE METHOD SET FORTH IN APPENDIX D OF THE CALIFORNIA STORM WATER BEST MANAGEMENT PRACTICES HANDBOOK FOR NEW DEVELOPMENT (2003), ADJUSTED FOR A LOCAL MEAN ANNUAL PRECIPITATION OF 15". A UNIT BASIN STORAGE FACTOR OF 0.54 IN WAS USED BASED ON AN 90% IMPERVIOUS COVERAGE.
5. AVAILABLE NRCS SOIL MAPS IDENTIFY SOILS IN THE PROJECT AREA AS TYPE 'D' SOILS WITH AN ESTIMATED SATURATED HYDRAULIC CONDUCTIVITY OF 0.2 IN/HR. DUE TO THE LOW INFILTRATION RATE OF THE SOILS, BIOTREATMENT AREAS WILL INCORPORATE THE USE OF A PERFORATED SUBDRAIN SYSTEM.
5. BMP AREA SIZING IS BASED ON THE COMBINATION FLOW/VOLUME SIZING CRITERIA DESCRIBED IN APPENDIX B OF THE SCVURPPP C.3 STORMWATER HANDBOOK, DATED APRIL 2013. SINCE THE BIOTREATMENT AREAS WILL BE DESIGNED WITH A SUBDRAIN, A DESIGN INFILTRATION RATE OF 5.0 IN/HR WAS USED BASED ON THE INFILTRATION RATE OF THE BIOTREATMENT SOIL MIX LAYER.
6. BASED ON FIG. 8-1 OF THE CITY OF MILPITAS STORM WATER C.3 GUIDEBOOK, THIS PROJECT IS NOT REQUIRED TO CREATE A HYDROGRAPH MODIFICATION MANAGEMENT PLAN BECAUSE THE PROJECT DOES NOT CREATE AN INCREASE IN IMPERVIOUS SURFACE OVER PRE-PROJECT CONDITIONS IN AN AREA THAT IS OVER 90% BUILT-OUT WITH GREATER THAN 65% IMPERVIOUS AREA. FLOOD CONTROL IS ALSO NOT REQUIRED, SINCE THE PROJECT REDUCES THE IMPERVIOUS COVERAGE FROM THE EXISTING CONDITION.

STORMWATER RUNOFF MANAGEMENT BMP CALCULATIONS

TRIBUTARY AREA ID	TRIBUTARY AREA (SF)	80% CAPTURE VOLUME (CF)	TREATMENT AREA NEEDED (SF)	TREATMENT AREA AVAILABLE (SF)	TREATMENT AREA ID
1	2,000	87	60	103	TA1
2	7,260	334	210	234	TA2
3	8,600	404	250	234	TA3
4	3,900	166	110	306	TA4
5	8,490	421	250	283	TA5
7	10,500	438	290	783	TA7
8	30,500	1,458	870	1096	TA8

TRIBUTARY AREA ID	TRIBUTARY AREA (SF)	Design WQ_F (gpm)	SCM Description	TREATMENT AREA ID
6	49,410	85.8	MEDIA FILTER	TA6



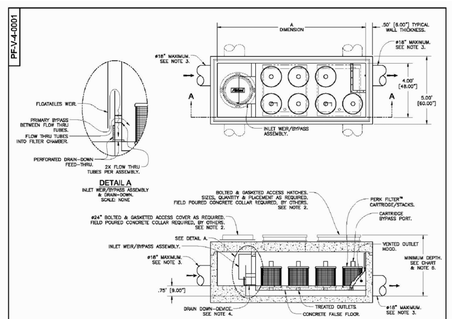
Notes:

1. Precast concrete structure shall be manufactured in accordance with ASTM Designation C857 and C858.
2. Filter system shall be supplied with traffic rated (H20) bolted & gasketed square/rectangular access hatches for use in shallow applications. Deeper applications may be configured with (H20) bolted & gasketed circular access cover configurations. Contact KriStar Enterprises, Inc for engineering assistance. Field poured concrete collars required, by others.
3. Inlet & outlet pipe(s) (Ø 18" maximum) may enter device on all three sides of the inlet & outlet chambers respectively. For pipe sizes greater than Ø 18", contact KriStar Enterprises for engineering assistance.
4. Inlet chamber shall be supplied with drain-down device, designed to remove standing water between storm events.
5. Perk-Filter systems may be supplied with individual or multiple 18" or 12" high Perk-Filter cartridges. Filter cartridge may be stacked to accommodate higher flow rates. Contact KriStar Enterprises for capacities.
6. For depths less than specified minimums contact KriStar Enterprises for engineering assistance.

TITLE: FilGard® Perk Filter™ — 4' WIDE CONCRETE VAULT — THREE TO SEVEN CARTRIDGES / STACKS

KriStar Enterprises, Inc. — 360 Sutton Place, Santa Rosa, CA 95407 — Ph: 800.579.8819. Fax: 707.524.8186, www.kristar.com

PF-V-4-0001 | A | 0087 JPR 4/25/11 | JPR 7/8/08 | SHEET 1 OF 2



MINIMUM DEPTH - RIM TO OUTLET INVERT -			
CARTRIDGE STACK CONFIGURATION			
12"	18"	12" + 12"	12" + 18"
4.25' [51.00"]	5.00' [60.00"]	5.75' [69.00"]	6.50' [78.00"]

4' VAULT TREATMENT FLOW RATES, TOTAL FLOW CAPACITIES & MAXIMUM HEAD LOSS											
A		CARTRIDGE STACK CONFIGURATION									
CARTRIDGE STACK QUANTITY*	DIMENSION - LENGTH** (IN-FEET)	12"		18"		12" & 12"		12" & 18"			
		TREATMENT FLOW RATE (GPM / CFS)	TOTAL FLOW CAPACITY (CFS)	TREATMENT FLOW RATE (GPM / CFS)	TOTAL FLOW CAPACITY (CFS)	TREATMENT FLOW RATE (GPM / CFS)	TOTAL FLOW CAPACITY (CFS)	TREATMENT FLOW RATE (GPM / CFS)	TOTAL FLOW CAPACITY (CFS)		
3	7	36 / 0.08	2.9	54 / 0.12	4.3	72 / 0.16	5.0	90 / 0.20	6.7		
4	9	48 / 0.11	2.9	72 / 0.16	4.4	96 / 0.2	5.0	120 / 0.27	6.8		
5	9	60 / 0.13	2.9	90 / 0.20	4.4	120 / 0.27	5.1	150 / 0.33	6.8		
6	11	72 / 0.16	3.0	108 / 0.24	4.5	144 / 0.32	5.1	180 / 0.40	6.9		
7	11	84 / 0.19	3.0	126 / 0.28	4.5	168 / 0.37	5.2	210 / 0.47	7.0		
MAXIMUM HEAD LOSS		1.7 FEET		2.3 FEET		2.9 FEET		3.5 FEET			

TITLE: FilGard® Perk Filter™ — 4' WIDE CONCRETE VAULT — THREE TO SEVEN CARTRIDGES / STACKS

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6 PRELIMINARY MEDIA FILTER DETAIL

RUGGERI-JENSEN-AZAR
ENGINEERS ▪ PLANNERS ▪ SURVEYORS
8055 CAMINO ARROYO
GILROY, CA 95020
PHONE: (408) 848-3300 FAX: (408) 848-3302

CONCEPTUAL STORM WATER CONTROL PLAN
SOUTH MAIN SENIOR LIFESTYLES PHASE 1

MILPITAS, CALIFORNIA

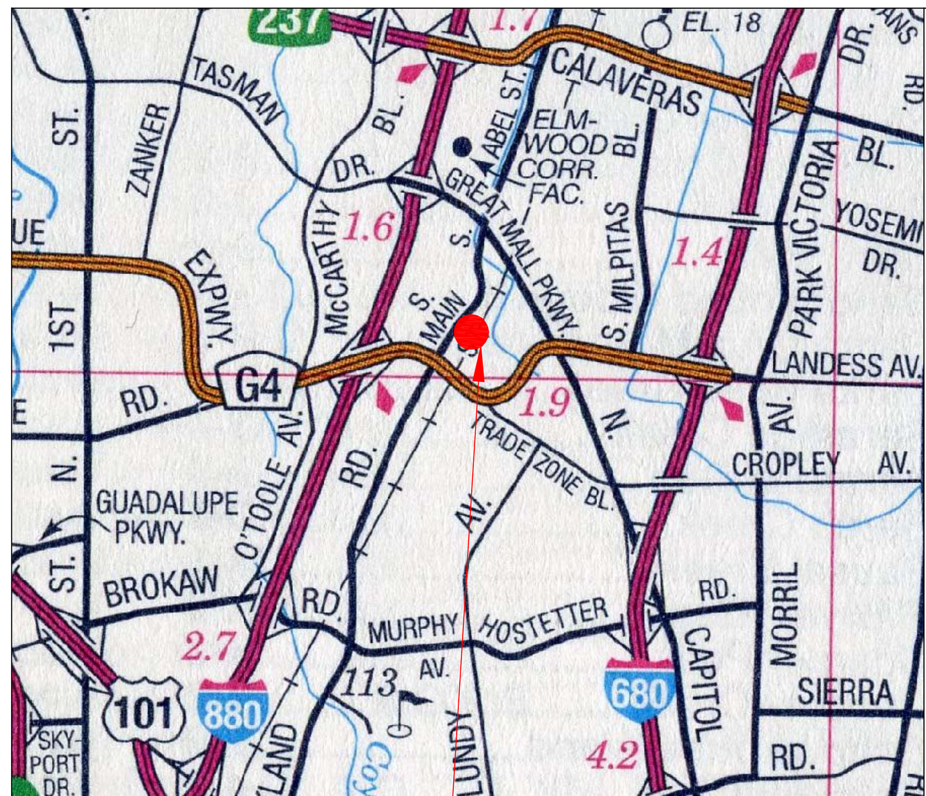
DATE	MK	SHEET REVISIONS	BY	CK

SCALE

DATE: AUGUST 8, 2014

SHEET 8 OF 10 SHEETS

JOB NO. 092041



PROJECT LOCATION — NTS 1:12 — 2

A. Location

The Property upon which the proposed Project will be developed is located at 1504-1620 South Main Street, Milpitas, California (APN's 086-22-027, 028, 046, 047 and 048) on the east side at its intersection of Cedar Street. The Property's gross land area is approximately 5.942 acres. The Property will be subdivided into two parcels to accommodate the two-phase development of the Property. The Phase 1 and Phase 2 Parcels will consist of approximately 3.02 and 2.92 gross acres, respectively. The Property is located within the "SP R4-TOD-S" Multi Family Very High Density with a Transit Oriented Development Overlay in the Milpitas Midtown Specific Plan Area. "SP R-4-TOD-S" zoning allows for development of 60 dwelling units/acre on the site (356 units) plus a maximum density bonus of 35% based on the number of affordable units the developments on the site would provide. The proposed Project will use only 389 of the total 480 units allowed with the maximum density bonus.

B. Proposed Project

The proposed Project is a 389-unit senior rental retirement community that will provide a continuum of care and services to its residents ranging from active independent living to congregate care and assisted living services. The Project will be developed in two phases, both restricted to occupancy by seniors at least 62 years of age. Of the total 389 units, 48 units will be restricted to occupancy by very low income households at rents that are below market rental rates. The Phase 1 Development will consist of 199 units of senior housing providing congregate care and assisted living services to its residents. The Phase 2 Development will consist of 190 units of active independent senior housing. ***This current submittal is for the Phase 1 Development only. Certain improvements that are within the boundaries of the Phase 2 Development will completed in Phase One. Those improvements include the work that is to be on South Main Street.***

C. Phase One Development

(a) Overview.

The Phase 1 Development will provide 10 units at below-market rental rates for occupancy by very low income (50% AMI) senior households and 189 units at market rental rates. In addition to accommodation in a unit, the monthly fee paid by all Phase 1 residents includes utilities and congregate care services (meals, housekeeping, scheduled transportation, 24-hour staffing, emergency response service, concierge services and a broad array of programs, events, classes and other activities). All 199 units in Phase 1 will be designed to be accessible to the disabled and licensed for assisted living, enabling congregate care residents to age in place and receive assisted living services (e.g., assistance with medication management, walking, dressing, grooming, bathing, toileting) as required without moving to another unit or to an assisted living facility. No Alzheimer/dementia care or skilled nursing services will be provided.

(b). Parking

The subterranean parking garage will have approximately 144 parking spaces and will be accessed from Costa Street. The amount of parking provided has been determined by historical data of projects of similar occupancy mix. The initial resident occupancy is anticipated to be 129 congregate care units and 70 assisted living units. As residents age in place this ratio is expected to reach 50% - 50%. The parking requirement for the proposed Phase 1 senior project is less than family housing owing to the age and non-ambulatory status of many residents. The parking provided in the garage is based on 0.7 parking space per congregate unit (129 DU at initial resident occupancy) or 91 parking spaces, plus staff parking of 35 spaces and one "small shuttle bus equating to 127 spaces. The balance of 17 spaces in the subterranean garage is allocated for visitor parking. No parking is provided for assisted living residents who are no longer capable of driving. There are approximately 28 spaces of additional visitor surface street parking along Costas Street, Cedar Way and South Main Street (within the Phase One Boundaries-more offstreet parking will be provided in Phase Two).

.

PROJECT DESCRIPTION — NTS 1:12 — 1

Waste Type	Generator Type	Quantity	Quantity/Day or Week	Sub-Total daily	Sub-Total weekly	Conversion	Loose Cu. Yd.	Compactor Conversion 3:1	Quantity of "Pick-Ups" per Week	Compactor Required
DWELLING UNITS			Gal./wk./unit		Gal./wk.	Gallons per. Loose Cubic Yd.	Loose Cubic Yd./wk.	Compacted Yd./Week		
Total Waste & Recycling of Dwelling Units	Dwelling Units	199	30	na	5970	200	29.85			
Senior Recycle Participation '@ 15% of Total Waste							4.4775	0 not compacted	1-4 yd. pick-up per Week	
Dwelling Unit Remaining Waste after Recyclables deducted from total							25.3725	8.4575	1-4yd pick-up twice per week	Mini-Mac Marathon Apartment Compactor located in garage, hauled out to street by by "golf cart" by project's employees "Front End Load"

Waste Type	Generator Type	Quantity	Quantity/Day or Week	Sub-Total daily	Sub-Total weekly	Conversion	Loose Cu. Yd.	Compactor Conversion 3:1	Quantity of "Pick-Ups" per Week	Compactor Required
KITCHEN & DINING		meal/setting	meals/day per resident	meals/day	meals/wk.	Loose Cubic Yd./meal	Loose Cubic Yd./wk.	Compacted Yd./Week		
Total Waste & Recycling of Kitchen/Dining	Kitchen/Dining	210	3	630	4410	0.008	35.28	11.76		
Kitchen Recycle Participation '@ 20% of Total Kitchen Waste							7.056	0 not compacted	1-4yd pick-up twice per week	
Kitchen-Dining Remaining Waste after Recyclables deducted from total							28.224	9.408	1-10yd pick-up per week	RJ-88SC SELF-CONTAINED COMPACTOR CONTAINER Located adjacent to Kitchen with direct feed-"Front End Load" 10 YARD COMPACTOR

WASTE AND RECYCLING CALCULATIONS — NTS 1:12 — 5

DESCRIPTION OF WASTE COLLECTION PROCESS:

DWELLING UNIT WASTE/RECYCLING COLLECTION:

The dwelling units will be cleaned by cleaning staff/employees of the complex. Trash and recyclables will be collected as part of the cleaning services and taken to the janitorial rooms that contain the 16" square trash chute and the 16" square recycle chute. The chutes connect to the garage "trash room" located in the center of the garage. Trash will be compacted by the "Mini-Mac" Marathon Apartment Compactor. The compacted trash will be in a 4 yd "wheeled bin". The compacted trash will then be towed through the garage, up the ramp, through the "van parking garage" (van will only be stored there at night) double doors to the garbage/recycle room. The transport vehicle is a custom "golf car' type vehicle, customized for this purpose. Compacted trash will be picked up twice a week. Recycled products will not be compacted and will be contained in 4 yd. " wheeled bin" - the transport to the garbage/recycle room will be the same as for the compacted garbage. Recycled material will be picked up once per week. Maintenance staff will be assigned on days of "pick-up" to assist Reliable Services Inc. drivers for traffic control and pick up maneuvers as required.

KITCHEN AREA COLLECTION:

The kitchen waste will be compacted by the "Ramjet" "RJ-88SC" 10 yd. self contained compactor/container. Collection of the kitchen waste will once per week. The kitchen recyclables will be contained in 4 yd. "wheeled bin. Kitchen recyclables will be picked up twice per week. The "RJ-88SC" 10 yd. & kitchen recycle bins will be located in the same room. Maintenance staff will be assigned on days of "pick-up" to assist Reliable Services Inc. drivers for traffic control and pick up maneuvers as required.

DESCRIPTION OF WASTE COLLECTION SYSTEMS — NTS 1:12 — 4

Northern CALIFORNIA COMPACTORS, INC.
LIC# 547975
P.O. BOX 5489 • PLEASANTON, CA 94566-1486 • PHONE (925) 462-3095 • FAX (925) 462-4050

July 29, 2014

James R. Burns

Collaborative Design Architects, Inc.

6114 La Salle Ave., PMB 465

Oakland, CA. 94611

RE: South Main Senior Lifestyles - Compactors

Dear James,

Thank you for your continued interest in Marathon Compactors for your project in Milpitas. We look forward to working with you and your customer on this project.

Based on the number of units this site will have and the low estimation of participation in the recycling program, it is our expert opinion that a Marathon Mini-Mac-3A compactor equipped with a 4 cubic yard capacity front load receiver container will need to be emptied twice a week to process the weekly volume of waste.

Based on the number of meals this site will serve and the conservative estimation of participation in the recycling program, it is our expert opinion that a Marathon RJ-88SC self contained, roll off compactor built with a 10 cubic yard capacity container will need to be emptied once a week to process the weekly volume of waste.

All of the front load receiver containers we have installed since 1981 serviced by Republic have been built to fit the forks on their trucks. We have never had an issue with the container not fitting their trucks.

All of the roll off style compactors we have installed since 1981 serviced by Republic have been built to fit the rails on their roll off trucks. We have never had an issue with a compactor not fitting their trucks. Please contact our office with any questions.

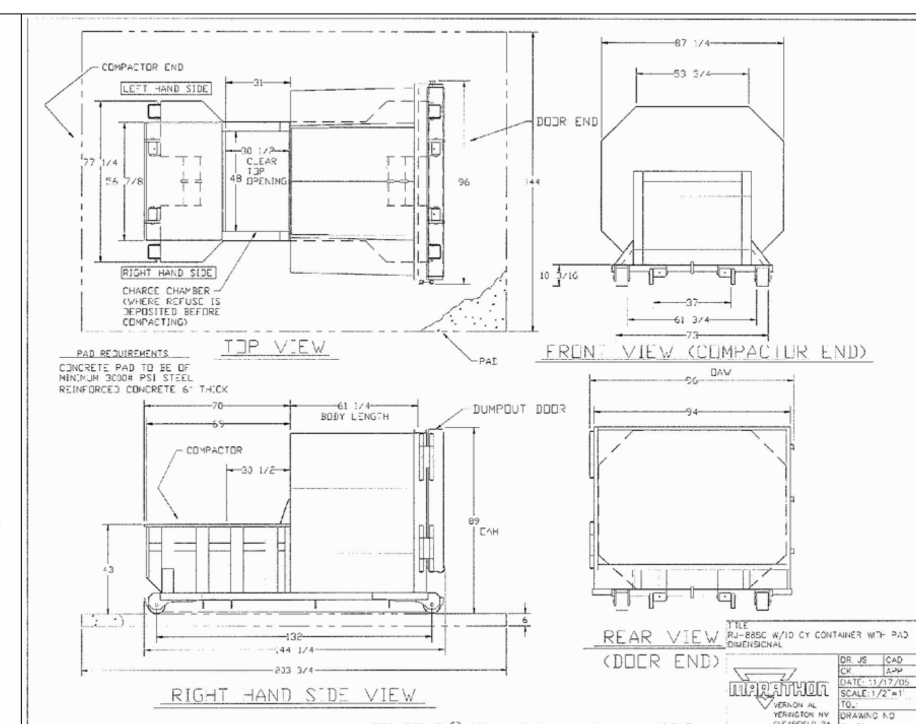
Very Truly Yours,

John Nethery

President

REFUSE IS A CONTROLLABLE EXPENSE
www.norcalcompactors.com
Printed on Recycled Paper

LETTER FROM NCC INC. CONFIRMING COMPATIBILITY WITH REPUBLIC SERVICES INC. TRUCKS — NTS 1:12 — 3



DETAIL DRAWING OF RJ-88SC 10 YARD MDL.

KITCHEN COMPACTOR-"RAMJET" "RJ-88SC" — NTS 1:12 — 7

DWELLING UNIT COMPACTOR-"MINI-MAC""MARATHON APARTMENT COMPACTOR — NTS 1:12 — 6

COLLABORATIVE DESIGN ARCHITECTS INC

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ARCHITECT'S STAMP: REGISTERED ARCHITECT JAMES R. BURNS LIC.NO. C017234 EXP. 1/31/2015 STATE OF CALIFORNIA

CONSULTANT'S STAMP

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SENIOR LIFESTYLES LLC
PHASE ONE SENIOR HOUSING

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South Main Street
Milpitas, California

SITE DEVELOPMENT PLAN
SD14-0006
VESTING TENTATIVE
TRACT MAP
TP-14-0001

Owner / Applicant

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SUBMITTALS / REVISIONS

MARK	DESCRIPTION	DATE
	SITE DEVELOPMENT PLAN Resubmittal #1	7-1-14
	VESTING TENTATIVE TRACT MAP Resubmittal #1	

KEY PLAN: NTS

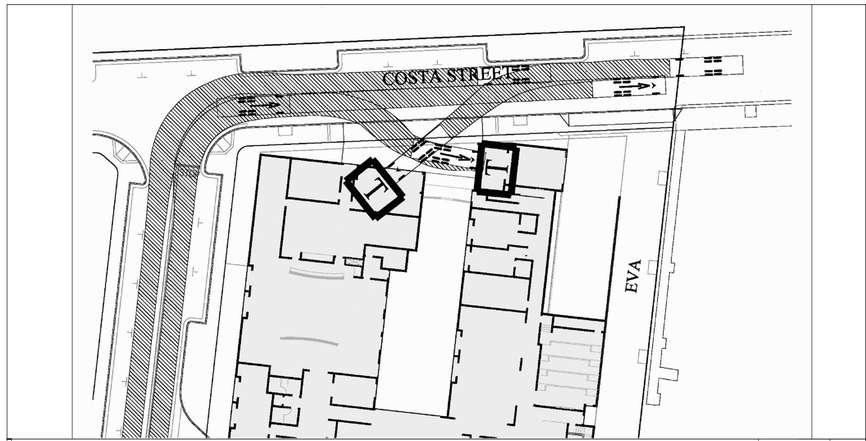
SOLID WASTE MANAGEMENT PLAN

SHEET DESCRIPTION

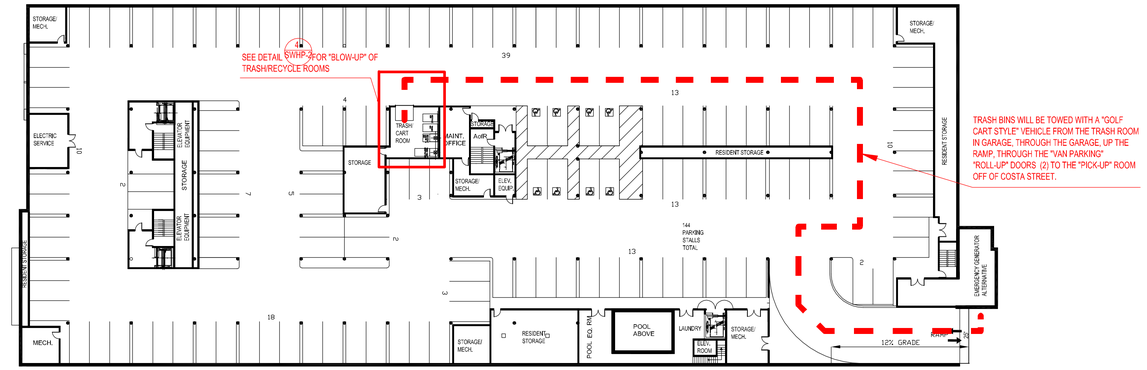
NORTH

SCALE: AS NOTED
DRAWN: JRB
APPRVD:
29003
CDA PROJECT NO.
CDA FILE PATH:

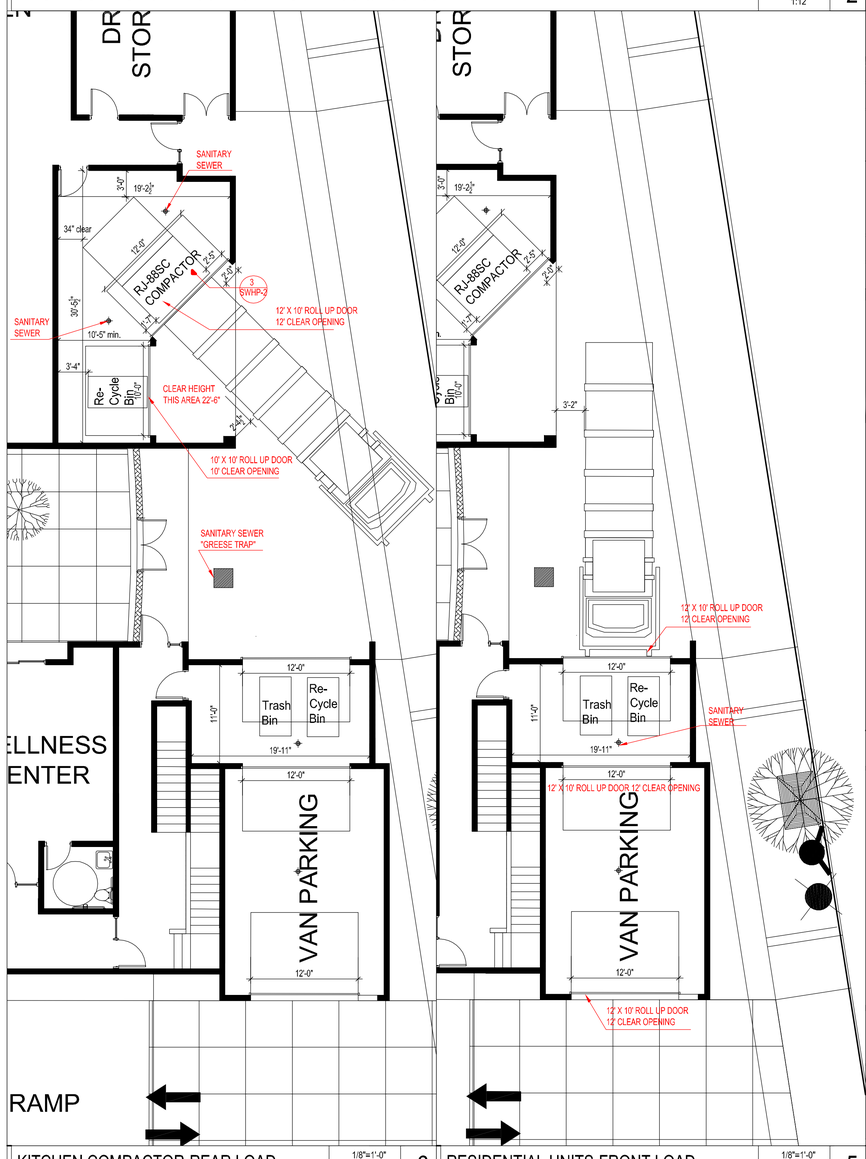
SW HP-1
SHEET NO.



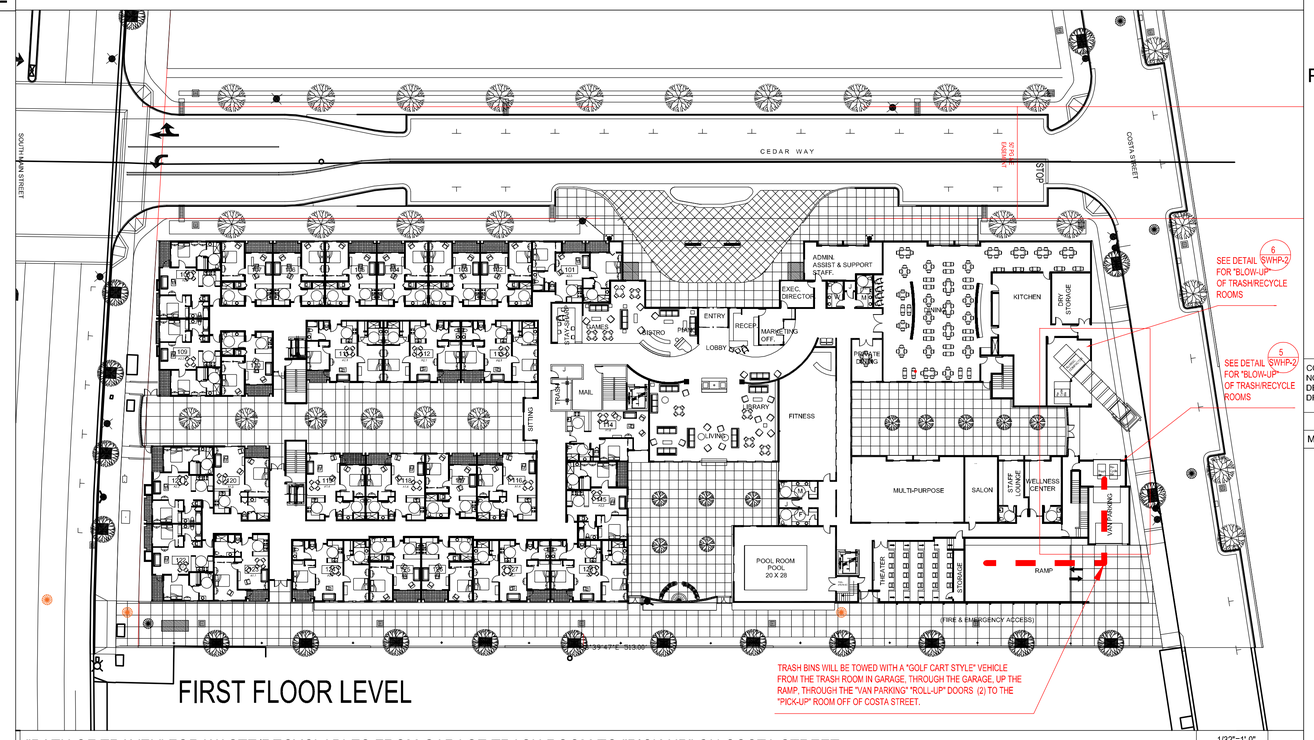
WASTE COLLECTION TRUCK TURNING RADIUS & ACCESS | 1/32"=1'-0" 1:12 | 2



SUBTERRANEAN GARAGE LEVEL

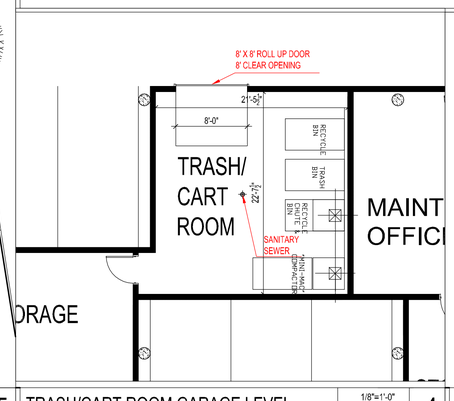


KITCHEN COMPACTOR-REAR LOAD | 1/8"=1'-0" 1:12 | 6

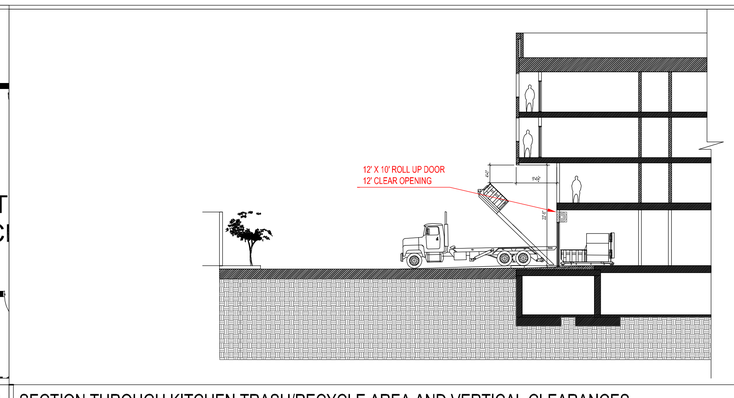


FIRST FLOOR LEVEL

"PATH OF TRAVEL" FOR WASTE/RECYCLABLES FROM GARAGE TRASH ROOM TO "PICK-UP" ON COSTA STREET | 1/32"=1'-0" 1:12 | 1



TRASH/CART ROOM GARAGE LEVEL | 1/8"=1'-0" 1:12 | 4



SECTION THROUGH KITCHEN TRASH/RECYCLE AREA AND VERTICAL CLEARANCES | 1/16"=1'-0" 1:12 | 3

RESIDENTIAL UNITS-FRONT LOAD | 1/8"=1'-0" 1:12 | 5

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ARCHITECT'S STAMP

REGISTERED ARCHITECT
JAMES R. BURNS, II
LIC.NO. C017234
EXP. 1/31/2015
STATE OF CALIFORNIA

CONSULTANT'S STAMP

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SENIOR LIFESTYLES LLC
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VESTING TENTATIVE
TRACT MAP
TP-14-0001

Owner / Applicant:

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MARK	DESCRIPTION	DATE
	SITE DEVELOPMENT PLAN Resubmittal #1 VESTING TENTATIVE TRACT MAP Resubmittal #1	7-1-14

KEY PLAN: NTS

SOLID WASTE MANAGEMENT PLAN

SHEET DESCRIPTION

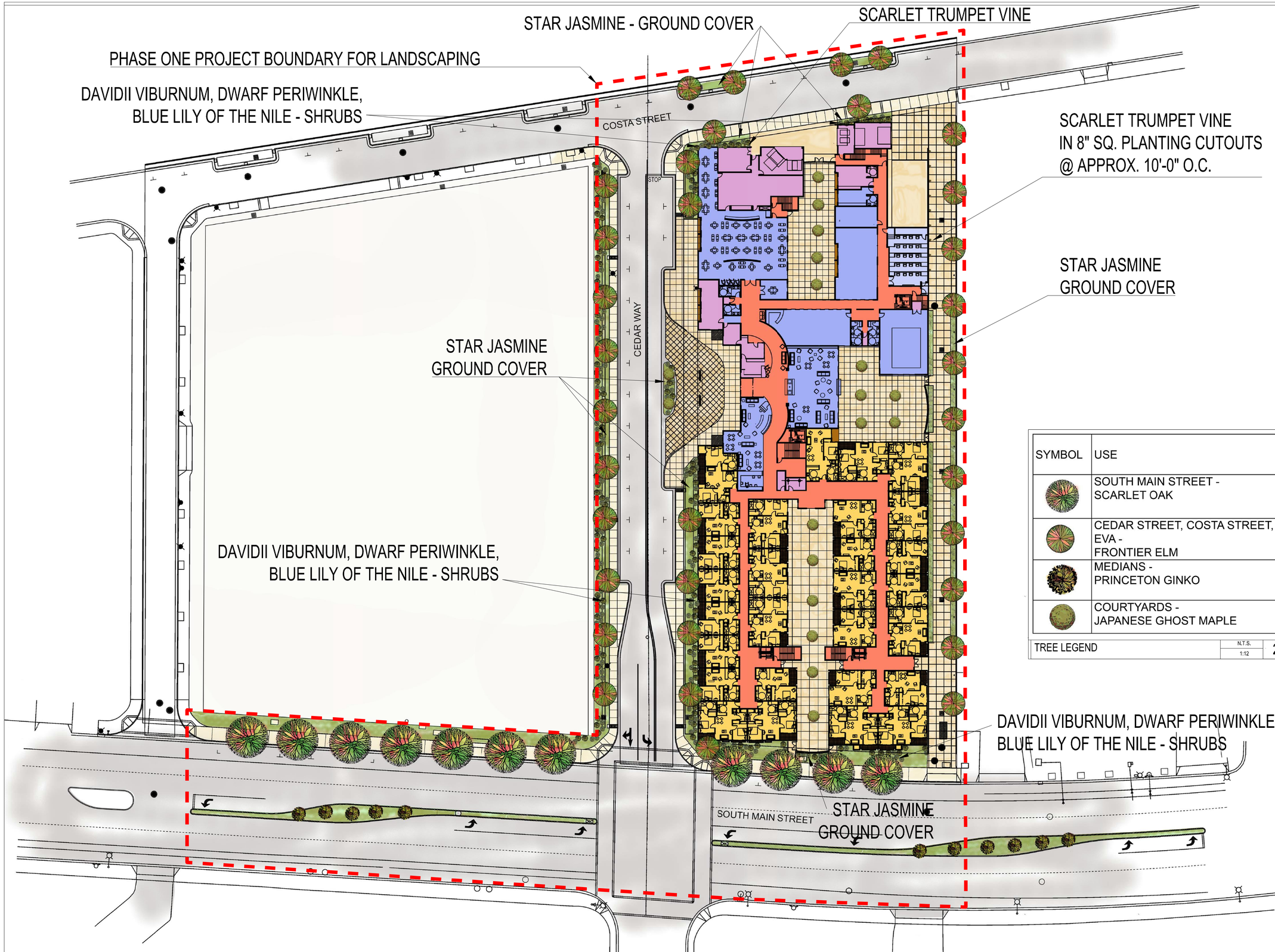
NORTH

SCALE: AS NOTED

CDA FILE PATH:

DRWN: JRB
APPRV'D:
29003
CDA PROJECT NO.

SW
HP-2
SHEET NO.



SYMBOL	USE
	SOUTH MAIN STREET - SCARLET OAK
	CEDAR STREET, COSTA STREET, EVA - FRONTIER ELM
	MEDIANS - PRINCETON GINKO
	COURTYARDS - JAPANESE GHOST MAPLE

TREE LEGEND — N.T.S. — 1:12 — 2

LANDSCAPE PLAN — 1"=1'-0" — 1:12 — 1

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	VESTING TENTATIVE TRACT MAP Resubmittal #1	

KEY PLAN: NTS

LANDSCAPE PLAN
PHASE ONE

SHEET DESCRIPTION

NORTH reference

SCALE: AS NOTED

DRWN: JRB

APPRV'D:

CDA FILE PATH:

29003
CDA PROJECT NO.

L1.1
26 OF 34
SHEET NO.

VIBURNUM DAVIDII | N.T.S. 1:12 | 5

TRACHELOSPERMUM JASMINOIDES | N.T.S. 1:12 | 6

AMBER GHOST JAPANESE MAPLE | N.T.S. 1:12 | 4

GINGKO BILOBA "PRINCETON SENTRY" | N.T.S. 1:12 | 3

ULMUS AMR. 'FRONTIER' - FRONTIER ELM | N.T.S. 1:12 | 2

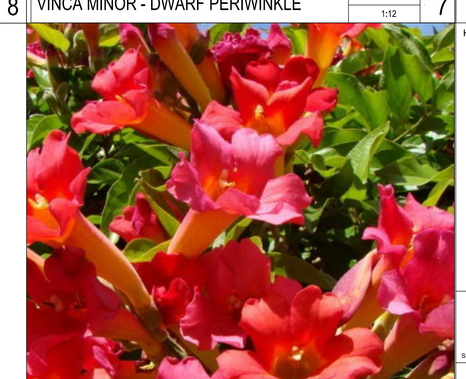
QUERCUS COCCIENA - SCARLET OAK | N.T.S. 1:12 | 1

PLANT MATERIAL		
TREES		
	QUERCUS COCCINEA	SCARLET OAK
	ULMUS AMERICANA 'FRONTIER'	FRONTIER ELM
	GINKO BILOBA	PRINCETON SENTRY GINGKO
	ACER PALMATUM 'AMBER GHOST'	AMBER GHOST JAPANESE MAPLE
VINES		
	DISTICTIS BUCCINATORIA	SCARLET TRUMPET VINE
SHRUBS		
	VIBURNUM DAVIDII	DAVIDII VIBURNUM
	VINCA MINOR	DWARF PERIWINKLE
	AGAPANTHUS AFRICANUS 'MIDNIGHT BLUE'	BLUE LILY OF THE NILE
GROUND COVER		
	TRACHELOSPERMUM JASMINOIDES	STAR JASMINE

PLANT MATERIAL | N.T.S. 1:12 | 10

AGAPANTHUS AFRICANUS 'MIDNT. BLUE' | N.T.S. 1:12 | 8

VINCA MINOR - DWARF PERIWINKLE | N.T.S. 1:12 | 7



DISTICTIS BUCCINATORIA | N.T.S. 1:12 | 89

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KEY PLAN: NTS

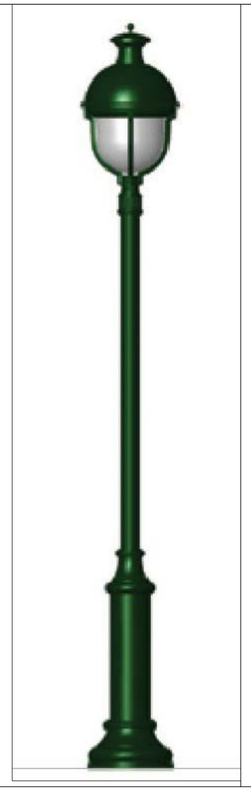
SHEET DESCRIPTION: LANDS. PLANT MATERIAL

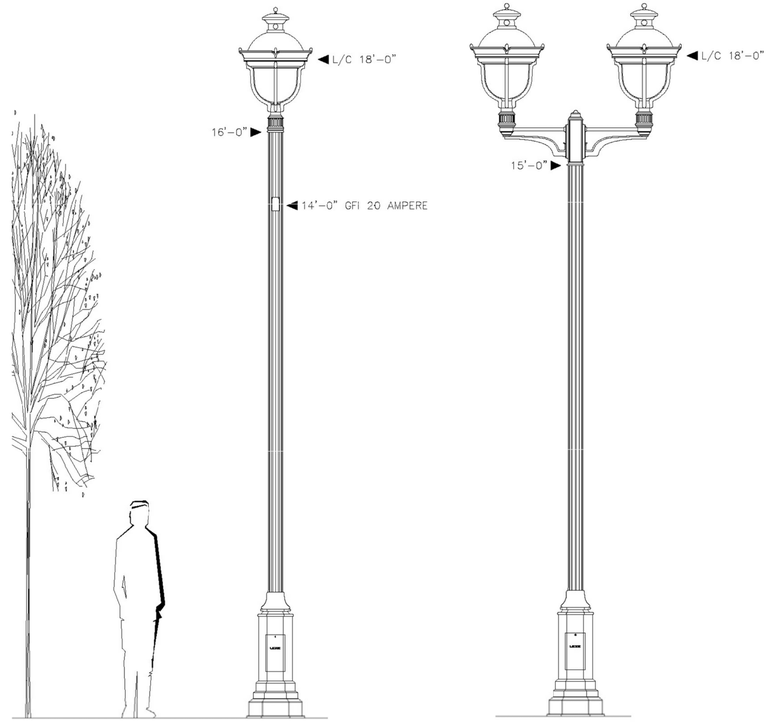
NORTH reference

SCALE: AS NOTED

DRWN: JRB
APPRV'D:
CDA FILE PATH:
29003 CDA PROJECT NO.

L1.1a
27 OF 34
SHEET NO.

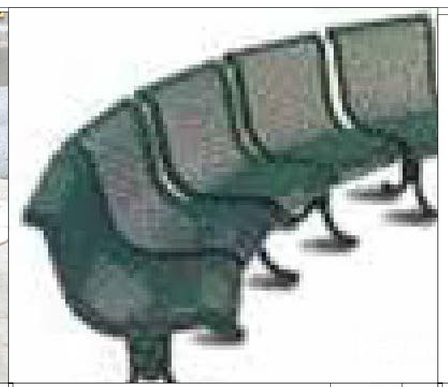




ANCESTRA LIGHT FIXTURE | N.T.S. 1:12 | 2

DAYTECH BUS SHELTER | N.T.S. 1:12 | 1

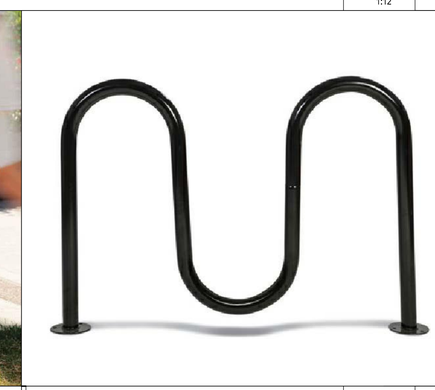
COLUMBIA CASCADE BOLLARDS | N.T.S. 1:12 | 7



CONCAVE BENCH | N.T.S. 1:12 | 6

WABASH TRASH RECEPTACLE | N.T.S. 1:12 | 5

GARDCO BOLLARD FOR EVA | N.T.S. 1:12 | 4

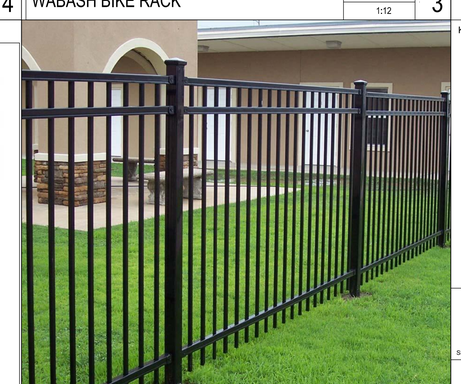


WABASH BIKE RACK | N.T.S. 1:12 | 3

STREET & SITE FURNISHINGS					
ELEMENT	DESCRIPTION AND COLOR	MANUFACTURER	ELEMENT	DESCRIPTION AND COLOR	MANUFACTURER
BUS SHELTER	BARREL ROOF TRANSIT SHELTER - CONTEMPORARY STYLE ACCO 4 X 12 HERITAGE CANTILEVERED DESIGN WITH BENCH. COLOR: BLACK	DAYTECH LIMITED	BOLLARDS	COLUMBIA CASCADE TIMBERFORM MODEL #2190-P, TIMBERFORM METAL BOLLARD, PEDASTAL MOUNT. STANDARD POWDER COAT COLOR:	COLUMBIA CASCADE TIMBERFORM
TRASH RECEPTACLE	FR400W - 32 GALLON RECEPTACLE, FLARE TOP, WELDED WIRE WITH FT100N -FLAT TOP LID - 14' DIA. OPENING; 32 GALLON LINER, LR105N SURFACE NOUNT POST PACKAGE. COLOR: BLACK	WABASH VALLEY	FENCING	WROUGHT IRON POWDERCOAT BLACK	LOCAL MANUFACTURER
CONCAVE BENCH	CL406P - 15 DEGREE W/BACK - S.M. - PERFORATED; A19 - 825 SEAT COLOR: CRANBERRY	WABASH VALLEY	BOLLARDS	BRM822 SCHOOL BOLLARD	GARDCO LIGHTING
STREET LIGHTING	AS SPECIFICED IN MAIN ST PLAN LINE STUDY	PHILIPS LUMEC	COURTYARD PLANTERS	TF4132 CONCRETE WETHERSTONE PROCELAIN, P2 FRENCH GRAY	WAUSAUTILE

STREET AND SITE FURNISHINGS | N.T.S. 1:12 | 10

WAUSAU TREE PLANTERS | N.T.S. 1:12 | 9



WROUGHT IRON FENCING | N.T.S. 1:12 | 8

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KEY PLAN: NTS

SITE FURNISHINGS
SHEET DESCRIPTION

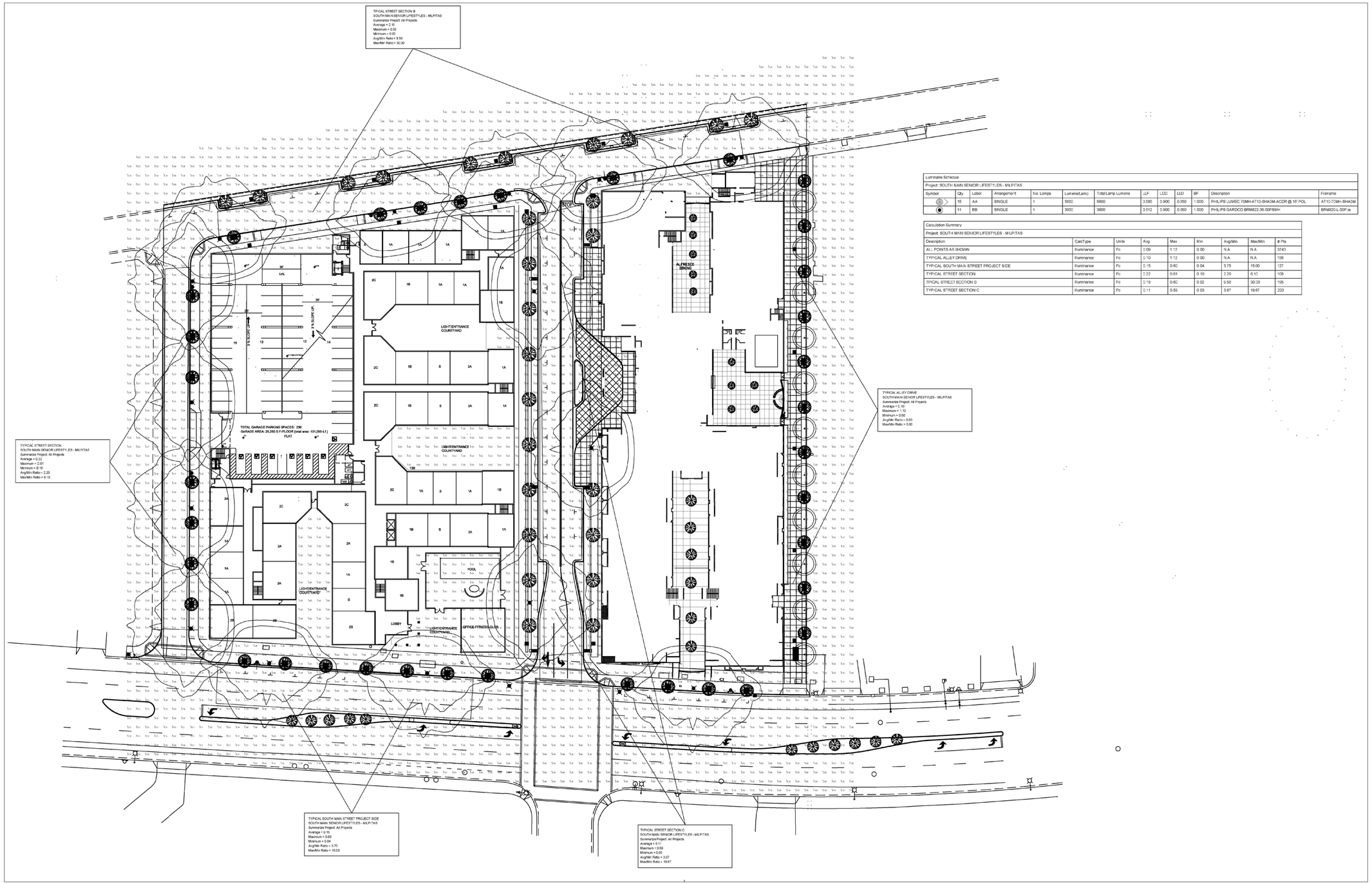
NORTH reference

SCALE: AS NOTED

DRWN: JRB
APPRV'D:
29003
CDA PROJECT NO.

CDA FILE PATH:

L1.2
28 OF 34
SHEET NO.



Luminaire Schedule

Project: SOUTH MAIN SENIOR LIFESTYLES - MILPITAS

Symbol	Qty	Label	Arrangement	No. Lamps	Lumens/Lamp	Total Lamp Lumens	LLF	LDD	LLD	BF	Description	Filename
	15	AA	SINGLE	1	5600	5600	0.585	0.900	0.850	1.000	PHILIPS LUMEC 70MH-AT10-SHA3M-ACCR @ 16' POL	AT10-70MH-SHA3M
	11	BB	SINGLE	1	3600	3600	0.612	0.900	0.850	1.000	PHILIPS GARDCO BRM823-36-50FSMH	BRM823-L-50F.ie

Calculation Summary

Project: SOUTH MAIN SENIOR LIFESTYLES - MILPITAS

Description	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	# Pts
ALL POINTS AS SHOWN	Illuminance	Fc	0.09	1.12	0.00	N.A.	N.A.	3743
TYPICAL ALLEY DRIVE	Illuminance	Fc	0.10	1.12	0.00	N.A.	N.A.	196
TYPICAL SOUTH MAIN STREET PROJECT SIDE	Illuminance	Fc	0.15	0.60	0.04	3.75	15.00	127
TYPICAL STREET SECTION	Illuminance	Fc	0.22	0.61	0.10	2.20	6.10	108
TPICAL STREET SECTION B	Illuminance	Fc	0.19	0.60	0.02	9.50	30.00	195
TYPICAL STREET SECTION C	Illuminance	Fc	0.11	0.59	0.03	3.67	19.67	203

COLLABORATIVE DESIGN ARCHITECTS INC

Oakland, CA

6114 LaSalle Avenue
Oakland

PMB 465
California 94611-2802

TEL 510 339-8880

FAX 510 339-1642

ARCHITECT'S STAMP

REGISTERED ARCHITECT
JAMES R. BURNS, II
LIC.NO. C017234
EXP. 1/31/2015
STATE OF CALIFORNIA

CONSULTANT'S STAMP

Project Description

SOUTH MAIN
SENIOR LIFESTYLES LLC
PHASE ONE SENIOR HOUSING
1504-1620
South Main Street
Milpitas, California

SITE DEVELOPMENT PLAN
SD14-0006
VESTING TENTATIVE
TRACT MAP
TP-14-0001

Owner / Applicant:

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SUBMITTALS / REVISIONS

MARK	DESCRIPTION	DATE
	SITE DEVELOPMENT PLAN Resubmittal #1 VESTING TENTATIVE TRACT MAP Resubmittal #1	7-1-14

KEY PLAN: NTS

SITE LIGHTING

SHEET DESCRIPTION

NORTH reference

SCALE: AS NOTED

DRWN: JRB

APPRV'D:

29003

CDA FILE PATH:

CDA PROJECT NO.

L1.3

29 OF 34

SHEET NO.

SITE LIGHTING

NTS

1:12

1

South Main Senior Lifestyles (SMSL)
Phase 1: Congregate Care and Assisted Living Project ("Project")
Parking Requirements

Of the Project's total 199 units, at initial occupancy 129 units are expected to be occupied by residents needing congregate care services and 70 units occupied by residents needing assisted living services. As the residents age in place this ratio is expected to reach 50% - 50%. The average age of residents of congregate care units at initial occupancy is 83 years. Congregate care residents are able to live independently without assistance with appointment reminders, medication management, walking, dressing, grooming, bathing, toileting and other personal care. Although ambulatory, the majority rely on a walker or scooter for assistance. Residents needing assistance with the activities of daily living are typically 85 years of age or older and quite frail.

The elderly residents of congregate care and assisted living units require less parking than active, independent seniors and much less parking than the families and younger individuals who account for the vast majority of residents in typical apartment communities. The reasons are many. First, fewer persons reside in each congregate care and assisted living unit than in an apartment unit. The maximum number of occupants for a 1- or 2-bedroom congregate care or assisted living unit is 2 people. Most congregate care and assisted living units are occupied by only one person. For example, at Heritage Estates only 10% of its total 250 one- and two-bedroom congregate care and assisted living units are occupied by 2 people. All of the remaining units have only one resident, resulting in an average occupancy of 1.07 persons per unit (for the year ending December 31, 2013). Occupancy at an apartment community typically is 1 - 3 persons for a 1-bedroom unit and 3 - 5 persons for a 2-bedroom unit, yielding an overall average of 3 persons per unit.

Second, fewer of the residents of congregate care and assisted living retirement communities have cars or are licensed to drive than residents of typical apartment projects. The congregate care residents commonly rely on the transportation provided by the retirement community (shuttle buses) and local public transportation rather than drive themselves. Residents requiring assisted living services do not drive or have vehicles. They rely exclusively on transportation provided by the retirement community and rides from family and friends.

Third, congregate care and assisted living residents have many fewer occasions/needs to travel to off-site destinations. The residents are retired, or work from home. The retirement community provides for most of the residents' daily needs on-site.

The Project will provide meals, activities and entertainment (including excursions to restaurants, the theater, opera, aquarium, wineries and other areas/activities of interest to the residents), concierge services, salons, fitness facilities and housekeeping services to all residents. Residents typically will leave the Project only for medical appointments or to visit with family and friends.

Fourth, the Project will provide regularly scheduled transportation to medical offices, shopping and entertainment centers and other destinations requested by the residents. Family and friends desiring to spend time with a resident will generally pick up the resident. Therefore, even the congregate care residents who own cars will rarely use them and many will sell their vehicles shortly after moving into the Project.

Fifth, the Project will be well-served by public transportation. The VTA light rail and BART metro stations are located within 1/4 mile of the Project. The Project's shuttle will provide regularly scheduled transportation to these stations.

In light of the above, a parking ratio of 0.7 per congregate care unit is more than sufficient to meet the parking needs of the Project's residents. This ratio significantly exceeds the maximum demand for parking at the congregate care and assisted living communities surveyed by the Institute of Traffic Engineers (ITE) *Parking Generation 4th Edition*, which indicated a maximum peak-period demand ranging from 0.48 – 0.54 spaces/congregate care and assisted living unit.

The Project will be staffed by approximately 65 full-time-equivalent employees who will provide services to the residents 24 hours per day. This staff estimate is based on actual staffing levels at Heritage Estates and on surveys conducted by the American Seniors Housing Association on staffing levels at comparable congregate care and assisted living projects. The Project's staff will work in staggered shifts with varying start times and duration. The peak staffing level will occur during the day and early evening hours, and is anticipated to be 30 - 35 employees. Nighttime and early morning staffing levels will be much lower because no meals, activities, programs or housekeeping are provided at these times.

Therefore, at initial occupancy the Project needs to provide 91 parking spaces for the 129 congregate care units (at a parking ratio of 0.7 vehicles/congregate care unit), no spaces for the assisted living units and 30 - 35 spaces for the peak-period staffing. This indicates a need for a total of 121 - 126 parking spaces, plus parking for the Project's 1 - 2 shuttle bus(es). Owing to the 24-hour staffing, there is no manager's unit and the general manager's parking need is included in the staffing total. The need for

resident parking will decrease over time as the resident's age in place and those with cars cease driving and sell their vehicles.

The Project's subterranean parking garage will have approximately 144 parking spaces. This is sufficient to provide 91 resident parking spaces, 35 staff parking spaces and parking for one small shuttle bus (if needed), equating to 127 spaces. The remaining 17 spaces in the subterranean garage will be available for visitor parking. A separate garage will provide parking for the Project's large shuttle bus. An additional 28 spaces of surface street parking along Cedar Way and the Project's portion of Costas Street will be available to accommodate visitors.

SOUTH MAIN SENIOR LIFESTYLES
1504-1620 SOUTH MAIN STREET
MILPITAS, CALIFORNIA
PHASE ONE – SUBMITTAL NARRATIVE-SITE DEVELOPMENT
10-13-14

1J

A. Location

The Property upon which the proposed Project will be developed is located at 1504-1620 South Main Street, Milpitas, California (APN's 086-22-027, 028, 046, 047 and 048) on the east side at its intersection of Cedar Street. The Property's gross land area is approximately 5.942 acres. The Property will be subdivided into two parcels to accommodate the two-phase development of the Property. The Phase 1 and Phase 2 Parcels will consist of approximately 3.02 and 2.92 gross acres, respectively. The Property is located within the "SP R-4-TOD-S" Multi Family Very High Density with a Transit Oriented Development Overlay in the Milpitas Midtown Specific Plan Area. “SP R-4-TOD-S” zoning allows for development of 60 dwelling units/acre on the site (356 units) plus a maximum density bonus of 35% based on the number of affordable units the developments on the site would provide. The proposed Project will use only 389 of the total 480 units allowed with the maximum density bonus.

B. Proposed Project

The proposed Project is a 389-unit senior rental retirement community that will provide a continuum of care and services to its residents ranging from active independent living to congregate care and assisted living services. The Project will be developed in two phases, both restricted to occupancy by seniors at least 62 years of age. Of the total 389 units, 48 units will be restricted to occupancy by very low income households at rents that are below market rental rates. The Phase 1 Development will consist of 199 units of senior housing providing congregate care and assisted living services to its residents. The Phase 2 Development will consist of 190 units of active independent senior housing. ***This current submittal is for the Phase 1 Development only. Certain improvements that are within the boundaries of the Phase 2 Development will completed in Phase One. Those improvements include the work that is to be on South Main Street.***

C. Phase One Development

(a) Overview.

The Phase 1 Development will provide 10 units at below-market rental rates for occupancy by very low income (50% AMI) senior households and 189 units at market rental rates. In addition to accommodation in a unit, the monthly fee paid by all Phase 1 residents includes utilities and congregate care services (meals, housekeeping, scheduled transportation, 24-hour staffing, emergency response service, concierge services and a broad array of programs, events, classes and other activities). All 199 units in Phase 1 will be designed to be accessible to the disabled and licensed for assisted living, enabling congregate care residents to age in place and receive assisted living services (e.g., assistance with medication management, walking, dressing, grooming, bathing, toileting) as required without moving to another unit or to an assisted living facility. No Alzheimer/dementia care or skilled nursing services will be provided.

(b). Parking The subterranean parking garage will have approximately 144 parking spaces and will be accessed from Costas Street. The amount of parking provided has been determined by historical data of projects of similar occupancy mix. The initial resident occupancy is anticipated to be 129 congregate care units and 70 assisted living units. As residents age in place this ratio is expected to reach 50% - 50%. The parking requirement for the proposed Phase 1 senior project is less than family housing owing to the age and non-ambulatory status of many residents. The parking provided in the garage is based on 0.7 parking space per congregate unit (129 DU at initial resident occupancy) or 91 parking spaces, plus staff parking of 40 spaces equating to 131 spaces. The balance of 13 spaces in the subterranean garage is allocated for visitor parking. No parking is provided for assisted living residents who are no longer capable of driving. There are approximately 46 spaces of additional visitor surface street parking along Costas Street, Cedar Way and South Main Street.

(c) Setbacks

Due to the site constraints of the PG & E Gas Main Easement (50') on the North side of Phase 1 and the requirement of a 20' Emergency Vehicle Access (EVA) on the South side of Phase 1, SMSL is requesting a Concession from the front and side setbacks (XI-10-12.06.E.5) to allow 10 feet instead of 12 pursuant to State Density Bonus Law and Milpitas Municipal Code Section XI-10-54.15.F.1.

1K

RECORDING REQUESTED BY:

City of Milpitas

WHEN RECORDED, MAIL TO:

Attn:

(SPACE ABOVE FOR RECORDER'S USE)

APNs: 086-22-027, 086-22-028, 086-22-046, 086-22-047, and 086-22-048

PUBLIC STREET MAINTENANCE AGREEMENT

THIS PUBLIC STREET MAINTENANCE ("Agreement") is made and entered into as of November 18, 2014 ("Effective Date") by and between SOUTH MAIN SENIOR LIFESTYLES, LLC, a California limited liability company ("Developer") and CITY OF MILPITAS, a municipal corporation of the State of California ("City"). Developer and the City may collectively be referred to herein as the "Party" or the "Parties".

RECITALS:

A. The Milpitas Housing Authority ("Housing Authority") is the owner of certain real property located in the City of Milpitas, County of Santa Clara, State of California, as shown on Exhibit A attached hereto and incorporated herein by reference (the "Property").

B. The Parties entered into a First Amended and Restated Disposition and Development Agreement on November 19, 2013, and a Memorandum of the Disposition and Development Agreement was recorded in the Santa Clara County Recorder's Office, as Document No. 22457857 (First Amended DDA), for the purposes of Developer purchasing the Property for development as follows:

1. The first phase residential development ("Phase One Development") consist of a one hundred ninety-nine (199) unit "continuum of care" senior (62 years of age and older) housing rental development and related amenities, parking, landscaping, and public street, utility and infrastructure improvements. The Phase One Development includes ten (10) residential units available at affordable housing cost to income-qualified very low income households.

2. The second phase residential development ("Phase Two Development") consist of one hundred ninety (190) apartment units for active, independent seniors (62 years of age and older), and related amenities, parking, landscaping and public street, utility, and infrastructure improvements.

The Phase Two Development includes thirty-eight (38) residential units available at affordable housing cost to income-qualified very low income households.

C. Simultaneously with the approval of this Agreement, the Milpitas City Council approved Vesting Minor Tentative Map No. TP14-0001, Site Development Permit No. SD14-0006, and Density Bonus No. DB14-0001 for the Phase One Development. Vesting Minor Tentative Map No. TP14-0001 will create three (3) legal parcels including two (2) parcels for the construction of two (2) public streets ("City Public Streets").

D. Developer will construct the two (2) public streets, as depicted in Exhibit A, attached hereto and incorporated herein by reference, as part of the Phase One Development, and will be required to maintain the two (2) public streets as further set forth in the Conditions of Approval for the Phase One Development entitlements described above and more particularly described in this Agreement.

E. The Parties desire to enter into this Agreement to set forth the roles and responsibilities of the Parties relating to the maintenance of the City Public Streets depicted in Exhibit A of this Agreement.

NOW, THEREFORE, for value consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereto agree as follows:

1. Grant of License. City grants Developer a non-exclusive license to maintain, repair, and replace those improvements to be constructed in, on, above, below, or within the City Public Streets as further depicted on Exhibit A, attached hereto and incorporated herein by reference (the "Public Street Improvements"). The parties acknowledge that the Public Street Improvements once completed will be dedicated to the City. To the extent the depiction of the Public Street Improvements set forth in Exhibit A varies from the actual Public Street Improvements constructed and dedicated to the City, then Exhibit A shall be modified to include the actual Public Street Improvements constructed and dedicated to City.

2. Party Status. For purposes of this Agreement, Developer shall be considered solely as a non-exclusive licensee and not as an agent or subsidiary of the City; no possessory interest or right to own, lease, occupy or control the Public Street Improvements or the City Public Streets are granted herein in any way.

3. Developer Defined. For purposes of this Agreement, the term "Developer" shall include any transferee or successor-in-interest.

4. Maintenance Obligations of Public Street Improvements.

   (a) Upon completion of the Public Street Improvements and dedication of the Public Street Improvements from Developer to City, Developer shall, at Developer's sole cost and expense, fully and timely perform and satisfy any and all terms, conditions, and maintenance obligations of this Agreement. Developer shall, at Developer's sole cost and expense, provide labor, supervision, supplies, materials, equipment, and any and all other tools and manpower necessary to clean, preserve, maintain and repair and replace the City Public Street and Public Street Improvements, as further set forth herein. The maintenance services required

herein are referred to as the "**Maintenance Services**" and shall be subject to City review and approval.

(b) Developer agrees and acknowledges that the City Public Street, as depicted in Exhibit A, will be public streets and open to the public as solely determined by City. Nothing herein gives Developer the right to restrict, exclude, or in any manner prohibit any person from the City Public Streets. If Developer believes that any portion of the City Public Streets need to be restricted or closed for public safety purposes to perform the Maintenance Services described herein, Developer shall obtain City's prior written approval of any restriction on access and also obtain City's prior written approval of the method of providing notice to the public and traffic handling.

(c) Developer and each of their respective employees, contractors, or agents shall have a non-exclusive right to enter into, over, and across the City Public Streets for the limited purpose of performing the Maintenance Services of the City Public Streets and Public Street Improvements subject to the approval requirements outlined in Exhibit C.

(d) Developer shall perform the Maintenance Services in full compliance with the maintenance standards set forth by the City for other similar public streets maintained by City and as further set forth in this Agreement (the **"City Standards**"). All maintenance performed under this Agreement shall be subject to City review and approval. After completion of the Public Street Improvements and prior to dedication of the City Public Streets, including the Public Street Improvements, the City and Developer shall immediately meet to discuss such maintenance obligations. Thereafter, City and Developer shall meet when requested by the City to confirm the scope of the maintenance obligations being performed by the Developer is consistent with City Standards. The costs of such maintenance shall be exclusively borne solely by Developer, provided, however, any costs associated with Capital Improvements for the Public Street Improvements shall be borne and paid by the City except as provided in Section 4(f) below and as further described in Exhibit C. Subject to Section 4(f) below, Capital Improvements is defined for purposes of this Section as any repair or replacement above and beyond the Maintenance Services set forth in this Agreement. In addition, if the City elects to change or modify any aspect of the design of the Public Street Improvements or the landscaping of the Public Street Improvements after completion and dedication of the Public Street Improvements, the costs associated with such changes or modifications shall be borne and paid by the City. In no way, shape, or form will Developer get any payments, tax credits or any form of compensation from City for the performance of such maintenance herein.

(e) Service Requests. Developer shall respond to all special service requests within forty-eight (48) hours. Special service requests can include any aspect of duty under the Maintenance Services, including graffiti abatement, the repair of vandalism (e.g., the scattering of broken glass), and pavement damage. All potential safety hazards or dangerous condition as determined solely by City shall be addressed within the same day; all other repairs shall be worked within the

regular maintenance schedule as soon as possible and shall commence within a maximum of forty-eight (48) hours.

(f) Scope of Work.

Developer shall furnish all supervision, labor, material, equipment and transportation required to maintain and/or repair the City Public Street and the Public Street Improvements in a safe, clean, functional, and attractive condition throughout the Term. All Maintenance Services shall be performed in accordance with all procedures set forth in operating manuals and warranty documentation for the care and preservation of any Public Street Improvements, applicable maintenance standards of the Public Street Improvements, City Public Street maintenance standards, and in conformance with Exhibit C, and all applicable laws and regulations relating to maintenance and repairs of the Public Street Improvements. All Maintenance Services performed under this Agreement shall be subject to City review and approval, including repairs and/or replacement of the Public Street Improvements.

(g) Work Force.

i. Developer shall designate one qualified representative with experience in public street maintenance to (1) meet with the City on a quarterly basis at the City Public Street; (2) be available by telephone for any emergency; (3) schedule and coordinate maintenance and repairs required under this Agreement; (4) coordinate and prepare pesticide and incident reports; and (5) address and respond to any questions or concerns that may arise during the performance of this Agreement.

ii. All Developer employees, agents, representatives, contractors or subcontractors ("**Work Force**") to perform Maintenance Services under this Agreement shall be personally presentable at all times. All Work Force shall be competent and qualified, and shall be U.S. citizens or have the legal right to work in the United States.

iii. All Work Force personnel shall be qualified to perform the duties assigned to them by Developer and possess the requisite licenses and necessary permits to perform such Maintenance Services. All Work Force shall conduct themselves at all times in a courteous and businesslike manner.

(h) Days and Hours of Services.
Maintenance Services shall be performed on Monday, Tuesday, Wednesday, Thursday, and Friday between 8:00 a.m. and 5:00 p.m., unless agreed to otherwise in writing

(i) Materials.
All materials used in the Maintenance Services, that are not standard materials used by the City shall be approved in advance by City's Director of Public Works (Director) prior to usage as part of the Maintenance Services. Developer shall meet all agricultural licensing and reporting requirements.

(j) Compliance.

i. Developer shall comply with all City rules, regulations, and policies relating to Public Street use, and special permitted public street activities at the Public Street Improvements. Unless explicitly authorized in this Agreement, nothing herein shall give Developer the authority to alter, revise, or otherwise restrict the public's use of the City Public Streets or the Public Street Improvements.

ii. Developer, or its contractor, shall be solely responsible for, and will pay, any excise, taxes, fees, contributions, or charges applicable to the conduct of its business or which may be levied on the Maintenance Services hereunder.

iii. Developer may not make any improvements, alterations, additions, or changes to the Public Street Improvements other than normal maintenance as described herein and in Exhibit C and in furtherance of providing agreed upon Maintenance Services, without obtaining City's prior written consent.

iv. Developer and/or its contractor, subcontractor, agent, or representative shall not store any equipment, materials, or supplies in, on or upon the City's Public Street or Public Street Improvements.

5. Damage or Destruction to Improvements.

In the event that the Public Street Improvements are damaged by fire or other casualty or event during the Term of this Agreement, Developer shall at Developer's sole cost, within thirty (30) days, commence and diligently pursue to completion the repair, replacement or reconstruction of the Public Street Improvements

6. Liens.

Developer shall keep the City Public Street and Public Street Improvements free from any encumbrances or liens arising out of any work performed, materials furnished or obligations incurred by or for Developer, provided however that Developer may contest any such liens in good faith by appropriate proceedings. Developer shall promptly pay and discharge all claims for work or labor done, supplies furnished or services rendered at the request of Developer and shall keep the City Public Street free and clear of all mechanics' and material liens in connection therewith. The City shall have the right to post or keep posted on the City Public Street, or in the immediate vicinity thereof any notices of non-responsibility for any construction, alteration or repair of the City Public Street by Developer. If any such lien is filed, the City may, but shall not be required to, upon written notice to Developer, take such action or pay such amount as may be necessary to remove such lien. Developer shall reimburse City for all reasonable sums paid by City under this Section within thirty (30) days after written notice is received from City of the amount expended.

7. Insurance of Developer.

(a) Before beginning any work under this Agreement, Developer shall procure "occurrence coverage" insurance against claims for injuries to persons or damages to property that may arise from or in connection with the performance of the work consisting of the construction of the Public Street Improvements and the ongoing maintenance of the Public Street Improvements hereunder by the Developer and

its agents, representatives, employees, and subcontractors. Developer shall provide proof satisfactory to City of such insurance that meets the requirements of this section and under forms of insurance satisfactory in all respects to the City. Developer shall maintain the insurance policies required by this section throughout the term of this Agreement and shall produce copies of said policies to the City upon demand. Verification of the required insurance shall be submitted and made part of this Agreement prior to execution.

(b) Subcontractors.
Developer shall include all contractors or subcontractors it retains to perform Developers obligations under this Agreement as insureds under its policies or shall obtain separate certificates and endorsements for each subcontractor.

(c) Workers' Compensation. Developer shall, at its sole cost and expense, maintain Statutory Workers' Compensation Insurance and Employer's Liability Insurance for any and all persons employed directly or indirectly by Developer in the performance of its responsibilities under this Agreement. The Statutory Workers' Compensation Insurance and Employer's Liability Insurance shall be provided with limits of not less than ONE MILLION DOLLARS ($1,000,000.00) per accident. The insurer shall waive all rights of subrogation against the City and its officers, officials, employees, and volunteers for loss arising from work performed under this Agreement.
An endorsement shall state that coverage shall not be suspended, voided, canceled, except after thirty (30) days' prior written notice has been given to the City.

(d) Commercial General and Automobile Liability Insurance.

i. General requirements. Developer, at its own cost and expense, shall maintain commercial general and automobile liability insurance for the term of this Agreement in an amount not less than TWO MILLION DOLLARS ($2,000,000.00) per occurrence, combined single limit coverage for risks associated with the work contemplated by this Agreement. If a Commercial General Liability Insurance or an Automobile Liability form or other form with a general aggregate limit is used, either the general aggregate limit shall apply separately to the work to be performed under this Agreement or the general aggregate limit shall be at least twice the required occurrence limit. Such coverage shall include protection against claims arising from bodily and personal injury, including death resulting therefrom, and damage to property resulting from Developer's performance, or failure to perform, its obligations under this Agreement, including the use of owned and non-owned automobiles.

ii. Minimum scope of coverage. Commercial general coverage shall be at least as broad as Insurance Services Office Commercial General Liability occurrence form CG 0001 (ed. 11/88) or Insurance Services Office form number GL 0002 (ed. 1/73) covering comprehensive General Liability and Insurance Services Office form number GL 0404 covering Broad Form Comprehensive General Liability. Automobile coverage shall be at least as broad as Insurance Services Office Automobile Liability form CA 0001 (ed.

12/90) Code 1 ("any auto"). No endorsement shall be attached limiting the coverage.

(e) Additional requirements. Each of the following shall be included in the insurance coverage or added as an endorsement to the policy:

i. City and its officers, officials, agents, and employees (the "City Additional Insureds") shall be covered as additional insureds with respect to each of the following: liability arising out of activities performed pursuant to this Agreement by or on behalf of Developer, including the insured's general supervision of Developer; products and completed operations of Developer with respect to the Public Street Improvements; premises owned, occupied, or used by Developer to the extent the same pertain to Developer's obligation under this Agreement; and automobiles owned, leased, or used by the Developer to the extent the same pertains to the Developer's obligation under this Agreement.

ii. The insurance shall cover on an occurrence or an accident basis, and not on a claims-made basis.

iii. An endorsement must state that coverage is primary insurance with respect to the City and its officers, officials, agents, and employees, and that, except as otherwise provided herein, no insurance or self-insurance maintained by the City shall be called upon to contribute to a loss under the coverage.

iv. Any failure of Developer to comply with reporting provisions of the policy shall not affect coverage provided to City and its officers, officials, agents, and employees.

v. An endorsement shall state that coverage shall not be suspended, voided, or canceled except after thirty (30) days' prior written notice has been given to the City.

vi. Verification of Coverages.
Insurance is to be placed with insurers acceptable to the City Manager. Developer shall furnish City with certificates of insurance and with original endorsements affecting coverage required by this Agreement. The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf.

Proof of insurance shall be either emailed in pdf format to: jmoneda@ci.milpitas.ca.gov, or mailed to the following postal address or any subsequent email or postal address as may be directed in writing by the Director of Public Works:

The City of Milpitas
Director of Public Works
Jeff Moneda
455 East Calaveras Blvd, 4th Floor
Milpitas, CA 95035

vii. Insurance coverage levels under this Agreement may be modified by the City, in its sole discretion and provided that such coverage levels are commercially reasonable, upon one (1) year's advance notice to the Developer.

viii. Developer shall provide to the City certificates of insurance upon acquisition and renewal of insurance coverage.

ix. In no event shall Developer be obligated to insure the City Additional Insureds with respect to any loss to the extent such loss is caused by the sole negligence or willful misconduct of the City, its employees, representatives, or agents.

8. Duration.

This term of this Agreement is perpetual unless otherwise terminated by agreement of both Parties in writing.

9. Right of City to Remedy Failure of Maintenance Obligation.

If Developer fails to comply with the provisions of this Agreement, then City may deliver written notice to Developer identifying the specific defects regarding the maintenance of the Developer Maintained Improvements. Subject to Section 4, Developer shall have Thirty (30) calendar days to correct the City's concerns, provided that if such correction cannot be completed within such thirty (30) calendar day time period, then Developer shall be afforded a reasonable amount of additional time to correct such City's concerns provided Developer commences such correction during such thirty (30) calendar day time period and diligently pursues such correction. Notice provided by the City shall specify the date Developer must remedy the City's concerns in order to avoid action by the City. If the Developer disagrees in good faith with the City's concerns, Developer shall notify the City of such disagreement within seven (7) business days of receipt of such notice and the parties shall discuss in good faith the City's concerns and Developer's disagreement with such concerns. Notwithstanding the foregoing, if the City determines an emergency situation exists which must be remedied immediately, then the City will provide written notice to Developer specifying the emergency situation must be remedied within twenty-four (24) hours or City may remedy such emergency situation on its own and submit an invoice to Developer for immediate payment.

If after notice from the City, Developer fails to correct the specific defects identified in the City's notice within the specified time period set forth above, the City shall have the right to remedy the defects. The City may retain, at its election its own contractors, or the Developer's contractors, or other appropriate third party company to complete the work. Any costs incurred by the City for maintenance of the City Public Street shall be solely borne by the Developer. The City shall provide an invoice for the maintenance cost incurred by the City to Developer. Developer shall remit payment to the City within thirty (30) days from receipt of the invoice. The Parties agree that any maintenance undertaken by the City under this section shall not terminate the maintenance obligation of Developer. In the event of non-compliance with the City's notice more than twice in any twelve (12) month period, or lack of prompt reimbursement, the City retains the right to any collection remedies it may have according to law.

10. City's Costs of Maintenance a Lien.

If the City incurs costs in restoring or maintaining the public street improvements after following the procedure set forth above, the City shall make demand on the Developer for payment, if the Developer fails to pay the costs incurred by the City within 30 days of the date demand was made, the City may make the costs a lien upon the real property depicted in Exhibit A by recording a notice that it has incurred expenses under the terms of this Agreement with the County Recorder of Contra Costa County. The notice shall state the fact that the City has incurred the costs under the terms of this Agreement and shall state the amount, together with the fact that it is unpaid, and draws simple interest at the rate of 7 percent a year until paid.

11. Indemnification.

Developer hereby covenants and agrees to indemnify, defend, and hold City, its officers, agents, and employees harmless from and against any and all claims, damages (including damage to property and injury to persons), demands, losses, obligations, judgments, liabilities, costs and expenses (including, without limitation, attorneys' and other fees) (collectively, "Losses") arising from or in any way connected with or related to any of the following: (i) any lawsuit, arbitration, administrative proceeding or other legal action directly concerning Developer's and/or its agents' maintenance or construction of the City Public Street Improvements and, (ii), any breach by Developer of any of its obligations under this Agreement. However, in no event shall Developer be obligated to defend or indemnify the City with respect to Losses to the extent caused by the sole negligence or willful misconduct of the City, its employees, representatives, or agents.

(a) If any portion of the City Public Street or any of Public Street Improvements, or any portion of the City Property is damaged by any of the activities conducted by Developer or its contractors or agents hereunder, Developer shall promptly, at its sole cost, repair any and all such damage and restore the City's Public Street, Public Street Improvements or any part of the City Property to substantially the same condition as it was prior to such damage, reasonable wear and tear accepted.

12. Validity.

If any one or more of the terms, provisions, promises, covenants, conditions or option provisions of this Agreement shall to any extent be adjudged invalid, unenforceable, void or voidable for any reason whatsoever by a court of competent jurisdiction, each and all of the remaining terms, provisions, promises, covenants, conditions and option provisions of this Agreement shall not be affected thereby and shall be valid and enforceable to the fullest extent permitted by law.

13. Notices.

Unless otherwise provided in this Agreement, all notices, demands, or other communications given pursuant to the terms of this Agreement shall be in writing and shall be deemed to have been given upon personal delivery or as of the second business day after mailing in the United States registered or certified mail, return receipt requested, postage prepaid, addressed as follows or to such other address or to such other person as either party may designate:

City:
City Milpitas
455 East Calaveras Boulevard, Fourth Floor
Milpitas, California 95035
Attention: Director of Public Works
Telephone: (408) 586-3000

Developer:
South Main Senior Lifestyles, LLC
c/o Callahan Property Company, Inc.
5674 Stoneridge Drive, #212
Pleasanton, CA 94588
Attn: Joe Callahan
Telephone: (925) 463-9205

14. Headings.

The titles or headings of the sections of this Agreement are not a part of the Agreement and shall have no effect upon the construction of or interpretation of this Agreement.

15. Binding Effect.
This Agreement, and the terms, provisions, promises, covenants, conditions and option provisions hereof, shall be binding upon and shall inure to the benefit of the parties hereto and their respective heirs, legal representatives, successors and assigns.

16. Nondiscrimination.

The Developer covenants by and for itself, its successors and assigns, and all persons claiming under or through it, that this Agreement is made and accepted upon and subject to the following conditions:

(a) That there shall be no discrimination against or segregation of any person or group of persons, on account of sex, marital status, race, color, creed, national origin, ancestry, gender, disability or sexual orientation, in the assignment of obligations or hiring for maintenance services on the City Public Street and Public Street Improvements herein operated.

17. Exhibits. This Agreement includes the following Exhibits that are attached hereto and incorporated herein:

Exhibit A Developer Property and Public Streets
Exhibit B Public Street Improvements Maintenance Functions
Exhibit C Maintenance Services

18. General Provisions.

(a) Hazardous Materials.

i. Developer covenants and agrees that it shall not cause or permit any Hazardous Material (as defined by "Laws" below) to be brought upon, kept, used, stored,

generated or disposed of in, on or about the City Public Street except in compliance with applicable environmental laws. Developer agrees that during the Term of this Agreement, Developer shall not be in violation of any federal, state or local law, ordinance or regulation relating to industrial hygiene, soil, water, or environmental conditions on, under or about the City Public Street including, but not limited to, Hazardous Material Laws. Developer further agrees that during the Term of this Agreement, there shall be no use, presence, disposal, storage, generation, release, or threatened release of Hazardous Materials on, from or under the City Public Street in violation of any Hazardous Material Laws. Developer shall take reasonable precautions to eliminate any hazards relating to its activities on or about the City Public Street and all Public Street Improvements hereunder.

ii. If Developer or any of its Members causes or permits the release of any Hazardous Materials in, on, under or about the City Public Street or any other City property, Developer shall, promptly, at no expense to City, take any and all appropriate actions to return the City Public Street or other City property affected thereby to the condition existing prior to such release and otherwise investigate and remediate the release in accordance with all applicable laws and requirements.

iii. Developer shall indemnify City from and against all claims or lawsuits during or after the Term of this Agreement relating to any release of Hazardous Materials as set forth in Section 9(A) above. The foregoing indemnity includes, without limitation, all costs associated with the investigation and remediation of Hazardous Material and with the restoration of the City Public Street to its prior condition including, without limitation, fines and penalties imposed by regulatory agencies, natural resource damages and losses, and re-vegetation of the City Public Streets and the Public Street Improvements.

(b) Waiver. The waiver by one Party of any breach by any other Party of any of the provisions of this Agreement shall not constitute a continuing waiver or a waiver of any subsequent breach either of the same or of another provision of this Agreement.

(c) Entire Agreement. This Agreement, including all exhibits attached hereto, represents the entire understanding of the Parties as to those matters contained herein. No prior oral or written understanding shall be of any force or effect with respect to those matters covered hereunder. This Agreement may be modified only by a written amendment duly executed by the Parties to this Agreement.

(d) Partial Invalidity. If any provision of this Agreement is held by a court of competent jurisdiction to be either invalid, void or unenforceable, the remaining provisions of this Agreement shall remain in full force and effect and unimpaired by the holding.

(e) Compliance with Laws. Developer shall each comply with all applicable laws, ordinances, codes, and regulations (collectively "**laws**") of the federal, state, and local governments, including without limitation, any and all laws specified elsewhere in this Agreement.

(f) Governing Law. This Agreement shall be governed by and in accordance with the laws of the State of California.

(g) Venue. In the event that suit shall be brought by either Party to this Agreement, the Parties agree that venue shall be exclusively vested in the state courts of the County of Santa Clara, or if federal jurisdiction is appropriate, exclusively in the United States District Court, Northern District of California, San José, California.

(h) Time is Essence. Time is of the essence with respect to the performance of each and every provision of this Agreement.

(i) Counterparts. This Agreement may be signed in counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same Agreement. A copy, original or facsimile with all signatures appended together shall be deemed a fully executed Agreement.

(j) Prevailing Wage. Developer shall carry out and shall cause its contractors to carry out the Maintenance Services in conformity with all applicable laws and regulations, including without limitation, all applicable federal and state labor laws and standards. To the extent applicable to the Maintenance Services, Developer and its subcontractors and agents, shall comply with California Labor Code Section 1720 et seq. and regulations adopted pursuant thereto ("**Prevailing Wage Laws**") and shall be responsible for carrying out the requirements of such provisions.

Developer shall, and hereby agrees to indemnify, defend (with counsel approved by City), protect and hold harmless the City, an its councilmembers, officers, employees, and agents from and against any and all demands, claims, losses or damages ("Claims") whether known or unknown, and which directly or indirectly, in whole or in part, are caused by, arise from, or relate to, or are alleged to be caused by, arise from, or relate to, the payment or requirement of payment of prevailing wages, the failure to comply with any state or federal labor laws, regulations or standards in connection with this Agreement, including but not limited to the Prevailing Wage Laws, or any act or omission of City or Developer related to this Agreement with respect to the payment or requirement of payment of prevailing wages, whether or not any insurance policies shall have been determined to be applicable to any such Claims. It is further agreed that City does not, and shall not, waive any rights against Developer which they may have by reason of this indemnity and hold harmless agreement because of the acceptance by City, or Developer's deposit with City of any of the insurance policies described in this Agreement.

(j) No Lease. This Agreement (i) is not a lease and does not grant Developer any real property rights in the City Public Street or Public Street Improvements, and (ii) shall not make Developer an agent for the City.

(k) Ownership. City, as the fee owner of the City Public Street shall own the Public Street Improvements constructed under this Agreement. Nothing stated in this

Agreement shall transfer any ownership rights or interests of the City Public Street or Public Street Improvements from City to Developer.

(l) Conflict. In the event of any conflicts between the terms and conditions of this Agreement and the terms an conditions of other agreements, the terms of this Agreement shall prevail.

(m) Successor and Assigns. This Agreement shall inure to the benefit and binds each of the Parties successor and assigns.

(n) Confidential Information. All City data, documents, discussions or other information developed or received by or for Developer in performance of this Agreement are confidential and must not be disclosed to any person or entity except as authorized in writing by City or as required by law ("Confidential Information"), provided however such Confidential Information may be disclosed to Developer's lenders, accountants, lawyers, insurers, representatives and any other advisors who shall be required under a written agreement to comply with this provision. Developer, its respective agents, directors, officers, employees, consultants, contractors, and subcontractors shall hold the Confidential Information in strict

confidence and not use on its own behalf or disclose such Confidential Information to any third party, unless required by law.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as set forth below.

Dated: _____
THE CITY OF MILPITAS,
A municipal corporation under the laws of the State of California

"CITY"

_____
City Clerk

APPROVED AS TO FORM:

_____
Name: Michael J. Ogaz
City Attorney

By:_____

Name: Thomas C. Williams
Its: City Manager

Dated: _____
SOUTH MAIN SENIOR LIFESTYLES, LLC,
a California limited liability company

"DEVELOPER"

By: _____
Joseph W. Callahan, Jr.
Managing Member

By: _____
James R. Burns II
Managing Member

[INSERT NOTARY]

EXHIBIT "A"

DEVELOPER PROPERTY AND CITY PUBLIC STREETS

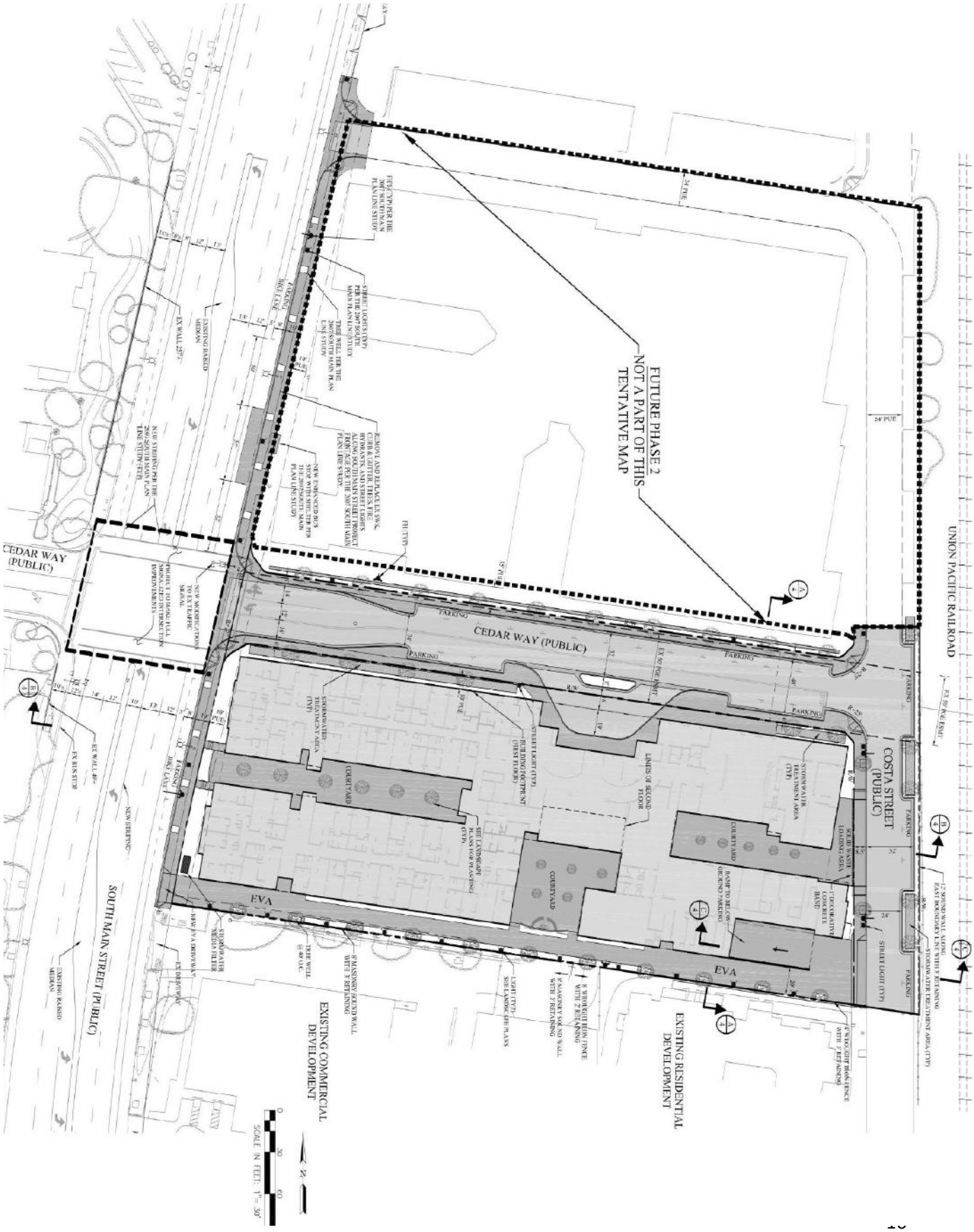

EXHIBIT "B"

PUBLIC STREET MAINTENANCE FUNCTIONS

Cedar Way and Costa Street Maintenance. Developer shall maintain all public improvements along and within Cedar Way and Costa Street. Maintenance activities will include restoration and capital repairs necessary to meet the City's standard of service.

Limits: Cedar Way and Costa Street shall be privately maintained public streets. The limit of private maintenance on Cedar Way shall begin from the back of concrete valley gutter on the east side of S. Main Street to Costa Street and bordered by back of sidewalks on Cedar Way. The limit of private maintenance on Costa Street shall begin from Cedar Way to the project southerly limit and bordered by the back of sidewalk and railroad sound wall.

Scope: Maintenance of these public streets shall include but not be limited to AC pavement, sidewalk, street lights, inlets, bioretention areas, railroad sound wall, landscapes, trees, striping and signing. Maintenance Functions shall be regularly performed to the following minimal standard levels:

(1) Roadbed. Restoration and repair of the surface and base within the roadbed extending from curb line to curb line. The Pavement Condition Index (PCI) shall be maintained above 70. The roadbed shall roadbed shall be inspected annually. PCI's below 70 shall be remediated within 4 months of inspection. Continuous vehicular access shall be maintained on all public streets.

(2) Roadside. The area between the roadbed and the outer right-of-way boundary line. Maintenance includes the cleaning of inlets, bioretention areas, gutters, culverts, restoring side slopes, removal of drifted material, drift prevention, erosion control work and maintenance of sound walls.,

(3) Curb, Gutter, and Sidewalk. Inspection, repair, and replacement of curbs, gutters, sidewalks, and other facilities as necessary to keep them in a reasonably safe condition. Sidewalks shall be kept free of tripping hazards. Continuous pedestrian (ADA compliant) access shall be maintained on all public sidewalks.

(4) Litter and Debris. Pavement, sidewalks, landscapes, and storm drain inlets shall be kept free of debris and litter (street sweeping, etc.)

(5) Pavement Delineation. All work necessary to maintain distinctive roadway markings on the travelled way including layout, removal of old stripe, painting of existing stripe, replacement/removal of raised pavement markers including the cleaning of markers, cross walks, and the use of thermoplastic, tape or raised bars.

(6) Graffiti, Vandalism, Private Signage. Pavement, sidewalks, street lights, and sound walls shall be kept free of graffiti and private signage. Signage maintenance shall consist of replacement of existing signs and the repair, cleaning, and painting of signs.

(7) Electrical. Inspection, repair, servicing, and replacement of street lighting, safety and sign lighting, traffic safety devices, and electrical facilities used to operate automatic watering systems. Street lights shall be in a good state of repair to provide nighttime illumination for safe vehicle and pedestrian travel. All traffic signal devices within Cedar Way, including detector oops, control boxes, etc. shall be maintained by the City.

(8) Landscaping, Irrigation, Bioretention. Landscaping, trees, and planting shall be irrigated, pruned, and fertilized to maintain healthy growth. Maintenance shall include weed abatement, tree trimming/removal, plant replacement, chipping, and pest control Irrigation lines, meters, and appurtenances shall be maintained, repaired or replaced as needed. All bioretention Treatment facilities shall be maintained to comply with all the provisions of the Mitigation and Reporting Program and the approved Storm Water Control Plan and Operation &Maintenance agreement.

EXHIBIT "C"

MAINTENANCE SERVICES

MAINTENANCE FUNCTION	MAINTENANCE SERVICES	FREQUENCY	PERMIT* REQUIRED
Roadbed	Inspect roadway for PCI of 70 Remove, repair, replace or install pavement section.	1 time per year. W/in 4 months	No Yes
Roadside	Inspect, clean, and remove all trash and debris.	As needed.	No
Curb, Gutter & Sidewalk	Blow pedestrian walkways. Power wash hard surfaces. Removal, repair, or replacement of C&G or SW. Pedestrian Tripping Hazard Removal	1 time per week 2 times per year As needed. Within 24 hrs	No No Yes Yes
Litter & Debris	Remove litter and debris. Street sweeping.	Within 48 hrs City Standard	No No
Pavement Delineation	Respond to delineation damage causing travel hazard Repair, replace damaged delineation. Routine restriping	Within 24 hrs Within 48 hrs City Standard	No Yes Yes
Graffiti, Vandalism, Signs	Graffiti removal (washing, cleaning, and painting). Vandalism removal, repair, and or replacement. Sign cleaning, repair, removal, and/or replacement.	Within 48 hrs Within 48 hrs As needed.	No No No
Electrical	Inspect, repair, service, or replace electrical facilities.	As needed.	Yes in ROW
Landscaping	Trim and edge turf. Collect and dispose of leaves. (3/1-10/31) Collect and dispose of leaves. (11/1-2/28) Weed Abatement (turf areas) Weed Abatement (non-turf areas) Hedging to retain and fullness of shrubs. Aerate Turf using tractor-mounted aerator. Structural tree trimming (not in travel lane). Structural tree trimming in travel lane. Pruning and trimming trees. Trim and fertilize landscape planting.	2 times per month 1 time per month 2 times per month 4 times per year 3 times per year 2 times per year 2 times per year 1 time per year 1 time per year 2 times per year 2 times a year	No No No No No No No No Yes No No
Irrigation	Check system, adjust and repair as needed. Irrigation Controller (IC) annual cleaning. IC fuse check. IC fuse & battery replacement. Test backflow preventer & submit certificate.	2 times per month. 1 time per year. 1 time per year. As needed. 1 time per year.	No No No No No
Bioretention Area	Per SCVURPPP guidelines and approved O&M Plan.	Per O&M plan.	Yes
Pest Control	Control flies, ants, bees, spiders, & other insects in landscaping and treatment areas.	As needed.	No
Vector control	Provide rodent control and removal to maintain safe and attractive landscape.	As needed.	No
Sound Walls	Inspection of structural stability and foundation. Repair, replacement of wall and/or foundation Graffiti removal	1 time per year As needed. Within 48 hrs	No Yes No
Emergency Repair	All public safety concerns & hazard removal.	Within 24 hrs	No

*All fees for encroachment permits required for the performance and inspection of maintenance services are hereby waived.