

STAFF REPORT FOR THE PLANNING COMMISSION MEETING OF APRIL 28, 2021

FILE NO: LU-2020-0096

AGENDA ITEM: E.3

STAFF CONTACT: Hope Sullivan, AICP, Planning Manager

AGENDA TITLE: For Possible Action: Discussion and possible action regarding a request for a modification to LU-2020-0051, a Special Use Permit for a residential use in a Neighborhood Business (NB) zoning district, to construct 140 apartment units (126 units were previously approved) that exceed the maximum height limitation for Neighborhood Business (NB) zoning (26 feet) by 3 feet (a total height of 29 feet) on a 6.13-acre parcel located on the south side of Little Lane, west of Janas Way, APN 004-015-06. (Hope Sullivan, hsullivan@carson.org)

STAFF SUMMARY: The applicant proposes to build a multi-family apartment complex consisting of 140 units (original approval was 126 units) in ten buildings with a height of 29 feet. Site amenities include a swimming pool, a clubhouse, a dog park and a children's play area. Access is proposed from Little Lane and Janas Way. The maximum height in the NB zoning district is 26 feet, although per CCMC 18.04.195 additional height may be allowed with a Special Use Permit. Per CCMC 18.04.120, multifamily residential development requires a Special Use Permit in the NB zoning district. The Planning Commission is authorized to approve a Special Use Permit.

PROPOSED MOTION: "I move to recommend approval of an amendment to LU-2020-0096 based on the ability to make the required findings, and subject to the conditions of approval contained in the staff report."

VICINITY MAP:



RECOMMENDED CONDITIONS OF APPROVAL

1. All development shall be substantially in accordance with Special Use Permit plans and application materials on file with the Carson City Planning Division.
2. All on and off-site improvements shall conform to City standards and requirements.
3. The use for which this permit is approved shall commence within twelve (12) months of the date of final approval. A single, one (1) year extension must be requested in writing to the Planning and Community Development Department thirty (30) days prior to the one (1) year expiration date. Should this permit not be initiated within one (1) year and no extension granted, the permit shall become null and void.
4. The applicant must sign and return the Notice of Decision within ten (10) days of receipt of notification. If the Notice of Decision is not signed and returned within ten (10) days, then the item may be rescheduled for the next Planning Commission meeting for further consideration.
5. As part of the building permit application, the applicant shall provide an open space exhibit, demonstrating compliance with Section 1.18.6.
6. All trash and recycling containers on the site shall be screened with trash enclosures meeting the requirements of Section 1.2.6 of the Development Standards.
7. A bike rack shall be installed on site in accordance with Section 1.2.2 of the Development Standards.
8. The applicant shall submit information on any exterior lighting that is proposed. Exterior lighting shall comply with Carson City Development Standards, Division 1.3.
9. The applicant shall provide landscaping for the property in compliance with Carson City Development Standards, Division 3 – Landscaping.
10. A six foot solid wall or fence shall be installed along the entire southern property line so as to create a buffer between the parking lot and the backyards of the homes to the south.
11. Any existing encumbrances to the parcel will remain in effect, including, but not limited to, the development agreement between the City and the subject parcel described in City Ordinance Number 1999-27, Bill Number 126.
12. On-site sewer and water must be privately owned and maintained.
13. A mass grading permit will not be allowed for this site. Grading must be completed with the overall site improvements. If the site is to be developed in phases, the phasing must be shown in the improvement plans. Phases must be able to meet development standards as they develop.
14. Little Lane is a 2-lane collector roadway with bike lanes. No parking will be allowed on Little Lane unless the sidewalk is removed and replaced 9 feet further south to provide additional width for parking and additional right-of-way is dedicated.

15. Wide cracks in Little Lane must be sealed and the pavement slurry sealed along the project frontage for the south lane.
16. A design-level geotechnical investigation report with detailed information of the subsurface soil conditions and recommendations for design and construction must be submitted with the application for a site improvement permit. This study must give design recommendations for areas with clay and high groundwater, specifically for foundations, streets sections, utilities, passive foundation dewatering, and must address the potential for liquefaction and any required mitigation.
17. The project must meet Carson City Municipal Code and Development Standards including, but not limited to the following:
 - The site is in a FEMA AO flood zone. The lowest finished floor elevation of all of the structures must be at least 2 feet above the base flood elevation. Also, any fill in the flood zone will need to be offset by an equal volume of cut or a detailed hydraulic analysis must be conducted to prove that there would be no significant impact to upstream or downstream properties. FEMA CLOMR approval will be required prior to approval of a site improvement permit and funds must be provided to process the LOMR. This may result in a decrease in the total number of units if additional space is required for flood volume mitigation.
 - The water lines must have appropriate backflow preventers per NAC 445A.
 - Sidewalk and curb and gutter must be installed along the project frontage on Janas Way, and paving to meet the local street section. This sidewalk must terminate in a pedestrian access ramp and an access ramp must be installed in the sidewalk on the opposite side.
 - A technical drainage study must be submitted which shows a clear 100 year flow path.
 - The retention basin needs to be designed to have the appropriate amount of freeboard over the adjacent storm drain pipe.
 - Dumpsters must be oriented in a way that is easily accessible for trash collection trucks.
19. The applicant will be required to repair and/or re-stripe the existing bike lane on Little Lane, if any damage occurs during site construction activities. Any repairs and/or re-striping will need to be completed to the satisfaction of Development Engineering and Parks, Recreation & Open Space Department.
20. The development will be subject to the collection of Residential Construction Tax (RCT), compliant with the Nevada Revised Statutes and Carson City Municipal Code (CCMC) 15.60.
21. The applicant will be required to maintain the project's proposed private clubhouse, pool, playground, sport court(s), and any other outdoor recreational amenities in perpetuity.
23. The applicant will be required to maintain all landscape and open space areas within the development, including any landscaping in the street(s) right-of-ways in perpetuity.
23. The applicant will be required to incorporate "best management practices" into their construction documents and specifications to reduce the spread of noxious weeds.

24. Carson City is a Bee Friendly USA City. As a result, the applicant shall use approximately 50% pollinator friendly plant material for any required landscape or open space areas on the project site.
25. The carports may not be located within the required setback area. At the time of building permit application, the applicant must clearly delineate compliance with all required setbacks.
26. The storm drain culvert along Janas Way must be located within the pavement section, rather than under the sidewalk to the extent practicable.
27. The CLOMR analysis will need to validate the changed site layout. The CLOMR application must be updated if the original CLOMR criteria is no longer valid.

LEGAL REQUIREMENTS: CCMC 18.02.080 (Special Use Permits), CCMC 18.04.120 Neighborhood Business (NB); CCMC DS 1.18 Residential Development Standards in Non-Residential Districts

MASTER PLAN DESIGNATION: High Density Residential (HDR)

PRESENT ZONING: Neighborhood Business (NB)

KEY ISSUES: Will the multi-family apartments and proposed additional height be compatible with the surrounding neighborhood and be in keeping with the standards of the Carson City Municipal Code?

SURROUNDING ZONING AND LAND USE INFORMATION:

- EAST: Mobile Home 6 / Mobile Homes on Individual Lots
- WEST: Neighborhood Business / Post Office
- NORTH: Multi-Family Apartment / Apartments and Single Family Attached
- SOUTH: Mobile Home 6 / Single Family Homes

ENVIRONMENTAL INFORMATION:

- FLOOD ZONE: AO Zone (100 year flood plain)
- EARTHQUAKE FAULT: Zone I (severe)
- FAULT ZONE: Beyond 500 feet
- SLOPE/DRAINAGE: Site is primarily flat

SITE DEVELOPMENT INFORMATION:

- LOT SIZE: 6.12 acres
- EXISTING DEVELOPMENT: Vacant
- PROPOSED DEVELOPMENT: 140 unit apartment complex
- SETBACKS:

	East	West	North	South
Required	30 feet	0 feet	30 feet	30 feet
Proposed	40 feet	10 feet	39 feet	31 feet to apt 10 feet to carport

Note per the definition of Adjacent, for purposes of determining setback requirements for adjacent uses, if the adjacent parcel is located across a public right-of-way, setback requirements shall be measured from the centerline of the right-of-way.

- VARIANCES REQUESTED: None

PREVIOUS REVIEWS:

LU-2020-0051: 126 unit apartment complex (residential use in a non-residential zoning district)

MPR-19-129: 132 unit multi-family apartment

SUP-19-164: 126 unit apartment complex (residential use in a non-residential zoning district)

SUP-19-164 modification: exceed the height limit by three feet

DISCUSSION:

At its meeting of January 27, 2021, the Planning Commission approved a special use permit for a 126-unit apartment complex consisting of ten 12-unit buildings, and one 6-unit building in a non-residential zoning district, as well as approved a special use permit to allow a building height of 29 feet, three feet more than the maximum height allowed by right in the NB zoning district. Access to the site was from Little Lane and from Janas Way. The plans included 39,220 square feet of open space, and amenities including a clubhouse, a swimming pool, pickle ball courts, and other outdoor amenities. The buildings were proposed to be two stories, with balconies. Building materials were proposed to be walls utilizing exterior insulation finish system and Hardie Plank Lap Siding, with a Hardie Plank Wood Grain Lap siding accent. The roofing was proposed to utilize architectural grade asphalt shingles.

The application is a proposal to modify the existing Special Use Permit as follows:

- Increase the number of dwelling units from 126 to 140.
- Increase the number of parking spaces from 252 to 280.
- Increase the size of the clubhouse from 2253 square feet to 3300 square feet.
- Reduce the number of residential building from 11 to 10.
- Increase the number of units per building from 12 to 14.
- Modify the building materials to eliminate the hardy siding and replace with stucco and add El Dorado stone accenting.
- Pickleball courts are removed, and pool area is expanded.
- Mailboxes and lockers are located outside of the clubhouse.
- A maintenance warehouse has been added near the clubhouse.

The subject property is zoned NB. Per CCMC 18.04.120, multi-family dwellings are a conditional use in the NB zoning district. Therefore, the use may only be established upon approval of a special use permit. Additionally, per CCMC 18.04.195, the maximum height in the NB zoning district is 26-feet, unless excess height is granted through a special use permit by the Planning Commission. Similarly, the Special Use Permit can only be modified by the Planning Commission upon the Planning Commission making the seven required findings in the affirmative, as well as the supplemental findings required by Development Standards 1.18.

PUBLIC COMMENTS: Public notices were mailed to 200 property owners within 600 feet of the subject property. As of the writing of this report, no letters from property owners in the vicinity of the proposed project have been received. Any comments that are received after this report is completed will be submitted to the Planning Commission prior to or at the meeting on April 28, 2021, depending on the date of submission of the comments to the Planning Division.

OTHER CITY DEPARTMENTS OR OUTSIDE AGENCY COMMENTS: The following comments

were received by various city departments. Recommendations have been incorporated into the recommended conditions of approval, where applicable.

Building Division: No comments.

Fire Department:

1. Project must comply with the currently adopted edition of the International Fire Code and Northern Nevada Fire Code Amendments as adopted by Carson City.

Engineering Division:

The Engineering Division has no preference or objection to the special use request provided that the following conditions are met:

- The conditions of approval from the original submittal must apply to the revised permit.
- The storm drain culvert along Janas Way must be located within the pavement section, rather than under the sidewalk to the extent practicable.
- The CLOMR analysis will need to validate the changed site layout. The CLOMR application must be updated if the original CLOMR criteria is no longer valid.
- The project must meet all Carson City Development Standards and Standard Details.

The Engineering Division has reviewed the application within our areas of purview relative to adopted standards and practices and to the provisions of CCMC 18.02.080, Conditional Uses. The Engineering Division offers the following discussion:

C.C.M.C. 18.02.080 (5a) - Master Plan

The request is not in conflict with any Engineering Master Plans.

C.C.M.C. 18.02.080 (5b) – Use, Peaceful Enjoyment, Economic Value, Compatibility

Development Engineering has no comment on this finding.

C.C.M.C. 18.02.080 (5c) - Traffic/Pedestrians

Local intersections:

- The site is in the SW corner of Little Lane and Janas Way. Little Lane is classified as a minor collector while Janas Way is a local street. A traffic impact study was submitted which analyzed the following intersections: Little Lane/Driveways, Little Lane/ Janas Way, Little Lane/South Roop Street, and Little Lane/ South Saliman Street. All of these intersections were shown to have an acceptable level of service with the project in the year 2040, including adjacent entitled projects.

Parking and internal circulation:

- Currently Janas Way provides on street parking. The on-site parking and drive isles meet Carson City Standards.

C.C.M.C. 18.02.080 (5d) - Public Services

Sanitary Sewer:

- The existing sewer main is 15-inch concrete on the north end of the property. This main will be 35% full with the additional demand from the project.

Water:

- The existing water main is 8-inch PVC on the east end of the property. There is a 6-inch asbestos concrete approximately 300 feet on the north-west end of the property. No connections are allowed to the 12-inch transmission main on the north end of the property. There is sufficient capacity in the existing water mains to supply this project

with domestic and fire water.

- The project shall be master metered for the water service. A looped water system is recommended due to the number of units in the development. Every water service shall be equipped with a reduced pressure principle backflow prevention assembly. Attention is drawn to NRS 704.940 in regard to metering, charging and billing for water supplied to individual units.

Storm Drain:

- The site is currently open land that drains to the street. The proposed project has a retention basin in the north east of the site and a detention basin in the south east of the site.

Public Lands:

- The project does not significantly impact City owned lands.

C.C.M.C. 18.02.080 (5e) – Title 18 Standards

Development Engineering has no comment on this finding.

C.C.M.C. 18.02.080 (5f) – Public health, Safety, Convenience, and Welfare

The project will meet engineering standards for health and safety if conditions are met.

Earthquake faults:

- The closest fault is over 500 feet away with the slip rate less than 0.2 mm/yr so no further analysis or mitigation is required with respect to known fault lines.

FEMA flood zones:

- The flood zone is zone X (shaded), Zone AO (depth 1 foot), and Zone AO (depth 2 feet). The CLOMR must be analyzed with the new site layout per the above conditions of approval.

Site slope:

- The existing site slope is estimated to be 0 to 2% so no further analysis or mitigation is required with respect to slopes.

Soils and Groundwater:

- The existing soil is sandy loam to clay loam with the depth to the ground water table is estimated to be high. The original conditions of approval which apply to this project include the requirement to obtain a geotechnical report which addresses any special construction necessary to address groundwater.

C.C.M.C. 18.02.080 (5g) – Material Damage or Prejudice to Other Property

Development Engineering has no comment on this finding.

C.C.M.C. 18.02.080 (5h) – Adequate Information

The plans and reports provided were adequate for this analysis.

SPECIAL USE PERMIT FINDINGS: Staff's recommendation is based upon the findings as required by CCMC Section 18.02.080 (Special Use Permits) enumerated below and substantiated in the public record for the project.

1. *Will be consistent with the master plan elements.*

The subject property is designated High Density Residential. This designation is

intended to create opportunities for higher-density neighborhoods in an urban and suburban setting. The primary uses are apartments, condominiums, townhomes, fourplexes and duplexes. The proposed use is consistent with this land use designation.

The zoning that best corresponds with the Master Plan designation is the Multi-Family Apartment (MFA) zoning. The MFA zoning district allows for a height of 45 feet. Therefore, staff finds that in designating the property for high density residential development, it was contemplated that development could consist of taller buildings.

2. *Will not be detrimental to the use, peaceful enjoyment, economic value, or development of surrounding properties or the general neighborhood; and will cause no objectionable noise, vibrations, fumes, odors, dust, glare or physical activity.*

This use will not be detrimental to the use, peaceful enjoyment, or economic value of surrounding properties. Staff finds the site is more appropriate for residential development than non-residential development due to the development of surrounding properties. The property backs up to single family residential uses and is across the street from residential uses on two sides. By developing the property as a residential use, the occupancy will be similar to that of surrounding uses and the general neighborhood.

Staff notes that the plans call for a six foot privacy fence along the southern property line to buffer the parking area from the single family homes.

Staff also finds that the additional height of three feet for an overall height of 29 feet will not be detrimental to the use, peaceful enjoyment, or economic value of surrounding properties. For context, the buildings across Little Lane at Arbor Villas are 28 feet, 6 inches tall. To the west of the property is the post office, and across Janas Way are mobile homes on individual lots. In considering this finding, staff is most sensitive to a potential adverse impact on the homes located to the south of the subject property. The required setback along the southern property line is 30 feet. Six of the seven buildings in the row closest to the southern property line are over 59 feet from the property line. The western most building is 31 feet from the southern property line. Also, the narrow elevation with a width of 50 feet will be facing the southern property line as opposed to the long elevation that has a length of 125 feet. Note that the covered parking along the southern property line will not be allowed as it encroaches into the setback. Uncovered parking is permitted.

Staff would note that a similar situation exists on property northeast of the subject property where the Planning Commission granted a Special Use Permit (SUP-19-102) for homes in a new subdivision (Little Lane Village) on the north side of Little Lane to have a height of 37 feet, 6.5 inches provided they were setback 61 feet from the property line. The setback requirement was to create space between the proposed homes and the existing single-family homes located to the north of the property.

3. *Will have little or no detrimental effect on vehicular or pedestrian traffic.*

The site is in the at the southwest corner of Little Lane and Janas Way. Little Lane is classified as a minor collector while Janas Way is a local street. A traffic impact study was submitted which analyzed the following intersections: Little Lane/Driveways, Little Lane/ Janas Way, Little Lane/South Roop Street, and Little Lane/ South Saliman Street.

All of these intersections were shown to have an acceptable level of service with the project in the year 2040, including adjacent entitled projects.

Currently Janas Way provides on street parking. The on-site parking and drive isles meet Carson City Standards.

Given this, it is anticipated that the existing infrastructure and drive aisles are sufficient to provide safe access and circulation. As proposed to be conditioned, the proposed residential use will have no detrimental effect on vehicular or pedestrian traffic.

The increase of height by three feet to yield a maximum height of 29 feet will not have a detrimental effect on vehicular or pedestrian traffic.

4. *Will not overburden existing public services and facilities, including schools, police and fire protection, water, sanitary sewer, public roads, storm drainage, and other public improvements.*

The existing sewer main is 15-inch concrete on the north end of the property. This main will be 35% full with the additional demand from the project.

The existing water main is 8-inch PVC on the east end of the property. There is a 6-inch asbestos concrete pipe approximately 300 feet on the north-west end of the property. No connections are allowed to the 12-inch transmission main on the north end of the property. There is sufficient capacity in the existing water mains to supply this project with domestic and fire water.

The project shall be master metered for the water service. A looped water system is recommended due to the number of units in the development. Every water service shall be equipped with a reduced pressure principle backflow prevention assembly. Attention is drawn to NRS 704.940 in regard to metering, charging and billing for water supplied to individual units.

The site is currently open land that drains to the street. The proposed project has a retention basin in the north east of the site and a detention basin in the south east of the site.

Given this, the existing sewer, water, and storm drain infrastructure are still sufficient to provide service to the project, even with the increased unit count.

The school district has advised that “for every 100 new homes, we expect about 30 new students. With most of the schools now at capacity, and limited capital funding for new facilities, we are concerned, as we cannot rezone our way out of the problem. We are doing our utmost to prepare for growth within our means.”

The increase of height by three feet to yield a maximum height of 29 feet will not create an impact on public services and facilities.

5. *Meets the definition and specific standards set forth elsewhere in this title for such particular use and meets the purpose statement of that district.*

Multi-family residential development is a conditional use in accordance with CCMC 18.04.120 Neighborhood Business Conditional Uses and requires a Special Use Permit. With the approval of this Special Use Permit and recommended conditions of approval,

the project will meet the definition and specific standards required to support this use in the Neighborhood Business zoning district.

Residential uses proposed in non-residential zoning districts are subject to specific criteria outlined in the Carson City Development Standards, Section 1.18 – Residential Development Standards in Non-Residential Districts. The development standards and how the proposed project meets them are addressed below.

1.18 Residential Development Standards in Non-Residential Districts.

1. Permitted uses. Residential uses are only allowed as permitted by Chapter 18.04, Use Districts, as a primary or conditional use in the applicable zoning districts.

The proposed multi-family use is a conditional use allowed with the approval of a Special Use Permit in the Neighborhood Business (NB) zoning district.

2. Maximum permitted density. There is no maximum residential density within non-residential zoning districts subject to meeting the height, setback, parking and open space requirements of Chapter 18.04.

The proposed application, subject to the conditions of approval, complies with the setback requirements, parking requirements, and open space requirements. The applicant is seeking a special use permit for excess height. The project's proposed residential density is approximately 22.8 dwelling units per acre. The Master Plan designation of High Density Residential identifies a range of 8 – 36 dwelling units per acre.

3. Maximum building height shall be the maximum height established by the zoning district in which the project is located.

The maximum building height in the Neighborhood Business zoning district is 26 feet, although excess height may be allowed with a special use permit. The applicant is seeking special use permit to have a height of 29 feet.

4. Setbacks. Minimum setbacks shall be those established by the zoning district in which the project is located, subject to the following:

a. In the NB, RC, GO and GO zoning districts, a minimum setback of 20 feet is required adjacent to a residential zoning district, with an additional 10 feet for each story above one story if adjacent to a single-family zoning district.

The subject property is adjacent to residential zoning on the east, north, and south sides. With the exception of the covered parking along the southern property line, the setbacks comply with the requirements of this provision on each of these sides, utilizing the mid-point of the road as the point of measurement where the adjacent property is across the street. Covered parking will not be allowed within the required setback areas.

b. A minimum setback of 10 feet is required from the right-of-way of an arterial street as identified in the adopted Transportation Master Plan, excluding the Downtown Mixed-Use area.

Neither Little Lane nor Janas Way are identified in the Transportation Master Plan as an

arterial street.

5. Required parking. Two spaces per dwelling unit, and in compliance with the Development Standards Division 2, Parking and Loading.

Per Division 2, two parking spaces are required for each dwelling unit. With 140 units proposed, this results in a requirement for 280 on-site parking spaces. The applicant proposes 280 parking spaces, thus the proposed plan is in compliance with this requirement. On street parking is available on Janas Way.

6. Open Space.

- a. A minimum of 150 square feet per dwelling unit of common open space must be provided. For projects of 10 or more units, areas of common open space may only include contiguous landscaped areas within no dimension less than 15 feet, and a minimum of 100 square feet per unit of the common open space area must be designed for recreation, which may include but not be limited to picnic areas, sports courts, a softscape covered with turf, sand or similar materials acceptable for use by young children, including play equipment and trees, within no dimension less than 25 feet.

The applicant has identified 39,152 square feet of open space throughout the site. The applicant is required to provide 35,000 square feet of open space, 14,000 square feet of which is designed for recreation. The applicant has proposed a 3300 square foot clubhouse, a swimming pool, a sports court, a play area, and a dog park.

- b. A minimum of 100 square feet of additional open space must be provided for each unit either as private open space or common open space.

With this requirement, a total of 35,000 square feet of open space is required. The applicant has identified 39,152 square feet of open space throughout the site.

- c. Front and street side yard setback areas may not be included toward meeting the open space requirements.

Per the proposed plan, the open space areas do not appear to encroach into the front or street side yard setback areas.

At the time of application for a site improvement permit, the applicant must submit a detailed open space exhibit demonstrating compliance with all open space requirements.

7. Landscaping. Landscaping shall comply with the Carson City Development Standards Division 3, Landscaping.

The applicant has identified areas for landscaping, but not a detailed landscape plan. A detailed landscape plan that demonstrates compliance with Development Standards, Division 3, should be submitted with the construction plans. Staff has included this statement in the conditions of approval.

8. Special Use Permit review standards. Where a residential use is a conditional use within a given zoning district, the Planning Commission shall make two of the following findings in the affirmative in the review of the Special Use Permit in addition to the required findings of Section 18.02.080 of the Carson City Municipal Code.

- a. The development is not situated on a primary commercial arterial street frontage.

This finding can be met. Neither Little Lane nor Janas Way is a commercial arterial.

- b. The development is integrated into a mixed-use development that includes commercial development.

The subject property is located adjacent to the post office, and nearby non-residential uses that create a mixed-use community.

- c. The applicant has provided evidence that the site is not a viable location for commercial uses.

- d. The site is designated Mixed-Use Commercial, Mixed-Use Residential or Mixed-Use Employment on the Master Plan Land Use Map and the project meets all applicable mixed-use criteria and standards.

6. *Will not be detrimental to the public health, safety, convenience and welfare.*

As conditioned, the proposed development will not be detrimental to public health, safety, convenience and welfare. The use is compatible with other uses in the neighborhood.

The increase in height from 26 feet to 29 feet will not be detrimental to public health, safety, convenience and welfare. The buildings at Arbor Villas across the street have a height of 28 feet, 6 inches, and a Special Use Permit was issued for homes proposed east of Arbor Villas to allow a height of 37 feet 6.5 inches provided the setback from the adjacent single family residential use is 61 feet. This request is for a maximum height of 29 feet with five or the six closest buildings more than 59 feet from the southern property line.

7. *Will not result in material damage or prejudice to other property in the vicinity.*

The proposed project will not result in material damage to other property in the vicinity. Conditions are recommended to ensure that the proposed development will not result in material damage to other property in the vicinity, including the requirement for fencing / wall along the southern property line adjacent to single family homes.

The proposed project height of 29 feet, will not result in material damage to other property in the vicinity, particularly due to the large setbacks.

Attachments:

Application LU-2020-0096

Carson City Planning Division
108 E. Proctor Street • Carson City NV 89701
Phone: (775) 887-2180 • E-mail: planning@carson.org

FOR OFFICE USE ONLY:

CCMC 18.02.080

LU-2020-0051

FILE

APPLICANT

PHONE #

KB Little Lane LLC

702-685-7180

MAILING ADDRESS, CITY, STATE, ZIP

1645 Village Center Cir, Ste 200, Las Vegas, NV 89134

EMAIL ADDRESS

Ahame@kbdev.com

PROPERTY OWNER

PHONE #

CMS Little Lane Apartments LLC 858-442-7170

MAILING ADDRESS, CITY, STATE, ZIP

P.O. Box 1727, Carson City, NV 89702

EMAIL ADDRESS

cclark@cwolarkinc.com

APPLICANT AGENT/REPRESENTATIVE

PHONE #

Anthony Hanna

702-553-9488

MAILING ADDRESS, CITY STATE, ZIP

1645 Village Center #200, Las Vegas, NV 89134

EMAIL ADDRESS

Ahame@kingsbarn.com

FEE*: \$2,450.00 MAJOR
\$2,200.00 MINOR (Residential
zoning districts)

+ noticing fee

*Due after application is deemed complete by
staff

☐ SUBMITTAL PACKET – 4 Complete Packets (1 Unbound
Original and 3 Copies) including:

- ☒ Application Form
- ☒ Detailed Written Project Description
- ☒ Site Plan
- ☒ Building Elevation Drawings and Floor Plans
- ☐ Special Use Permit Findings
- ☐ Master Plan Policy Checklist
- ☐ Applicant's Acknowledgment Statement
- ☐ Documentation of Taxes Paid-to-Date
- ☐ Project Impact Reports (Engineering)

☐ CD or USB DRIVE with complete application in PDF

Application Received and Reviewed By: _____

Submittal Deadline: Planning Commission application
submittal schedule.

Note: Submittals must be of sufficient clarity and detail for
all departments to adequately review the request. Additional
information may be required.

Project's Assessor Parcel Number(s):

004-015-06

Street Address

935 Little Lane, Carson City, NV

Project's Master Plan Designation

High Density Residential

Project's Current Zoning

NB - Neighborhood Bus.

Nearest Major Cross Street(s)

Little Lane & Janas Way

Please provide a brief description of your proposed project and/or proposed use below. Provide additional pages to describe your request in more detail.

See attached

PROPERTY OWNER'S AFFIDAVIT

I, Craig W. Clark, being duly deposed, do hereby affirm that I am the record owner of the subject property, and that I have
knowledge of, and I agree to, the filing of this application.

Signature

Address

Date

Use additional page(s) if necessary for additional owners.

STATE OF NEVADA

COUNTY OF CARSON CITY

On March 11, 2021, Craig W. Clark

personally known (or proved) to me to be the person whose name is subscribed to the foregoing document and who acknowledged to me that he/she
executed the foregoing document.

Kathleen J. Boeck
Notary Public



KATHLEEN JANE BOECK
NOTARY PUBLIC
STATE OF NEVADA
My Commission Expires: 09-28-24
Certificate No: 20-4406-03

NOTE: If your project is located within the Historic District or airport area, it may need to be scheduled before the Historic Resources Commission or the
Airport Authority in addition to being scheduled for review by the Planning Commission. Planning staff can help you make this determination.

If there is any additional information that would provide a clearer picture of your proposal that you would like to add for presentation to the Planning Commission, please be sure to include it in your detailed description.

Please type and sign the statement on the following page at the end of your findings response.

ACKNOWLEDGMENT OF APPLICANT

I certify that the forgoing statements are true and correct to the best of my knowledge and belief. I agree to fully comply with all conditions as established by the Planning Commission. I am aware that this permit becomes null and void if the use is not initiated within one-year of the date of the Planning Commission's approval; and I understand that this permit may be revoked for violation of any of the conditions of approval. I further understand that approval of this application does not exempt me from all City code requirements.



Applicant's Signature



Print Name



Date

Major Project Review

Little Lane Apartments

Detailed Project Description

Little Lane apartments is a fully entitled 126-unit apartment project located at Little Lane and Janas Way in Carson City, NV. The project site is 6.12 acres and is currently vacant with generally level topography. The current approved plans depict 11 residential buildings and an approximately 2,250 square foot clubhouse building with swimming pool. There are also common area amenities which include a dog park, barbecues, outdoor seating, fire pits and walking paths.

KB Little Lane LLC is in the process of acquiring the property from the current owner, CMS Little Lane Apartments LLC, and is proposing to make changes to the approved plans which has triggered the need for a new SUP on this project. KB Little Lane is proposing the following changes to the plans:

- Reduce the number of residential buildings from 11 to 10. The lone Building Type II, which contains 6 units, will be eliminated.
- Building Type I, which consists of 10 identical 2 story buildings, has been redesigned and will now have 14 units per building rather than 12 units. The location and footprint of these buildings is unchanged from the approved plans. Gross building area of each building has increased by less than 4%.
- Unit sizes are much more appropriate for the market and the design is greatly improved. All units now include kitchen islands, 8-foot patio sliders and entry doors, coat closets, bathroom shelving and larger secondary bedrooms.
- The exterior elevation of the buildings has been updated, eliminating the hardy siding and replacing with stucco. Other elevation changes include additional El Dorado stone accenting, larger patio sliders and added windows.
- The clubhouse has been increased to approximately 3,000 square feet. We have added a leasing office, storage room and increased the size of the fitness center and lounge. The clubhouse has a greater “resort” feel and we have enhanced the indoor/outdoor experience with more windows and pocket slider windows.
- The clubhouse elevation has also been changed to match the residential units. Natural light has been enhanced with added windows and an expansive glass line on the pool side of the clubhouse.
- The pool area has been expanded to provide additional seating, a fire pit, cabanas and outdoor kitchen. Two of the pickleball courts have been eliminated to accommodate the expanded pool area.
- Mailboxes are now located outside of the clubhouse on the south elevation. A large bank of amazon lockers has also been added.
- A maintenance warehouse has been added near the clubhouse.
- The increase in unit count to 140 units (from 126 units) has required the addition of 28 additional parking spaces. To accomplish this, we have eliminated Building Type II and added parking stalls and drive aisles in this area. The dog park and children’s play areas remain, and we have added additional seating, bbq’s and a trellis cover in the open park space. Design and functionality in this area is greatly improved.

- Landscape islands on the southern end of the property have been eliminated to accommodate additional parking. Trees and shrubs will be added to comply with code requirements.

We believe these changes greatly enhance the overall aesthetic of the project with virtually no change in building area and very modest site plan modifications. Additionally, we feel that these changes provide a better resident experience with best in market amenities, parking and open space. Little Lane apartment homes will be the premier rental community in Carson City.

SUP Submittal
Little Lane Apartments
Master Plan Policy Checklist Responses

CHAPTER 3 : A BALANCED LAND USE PATTERN

The Carson City Master Plan seeks to establish a balance of land uses within the community by providing employment opportunities, a diverse choice of housing, recreation opportunities, and retail services.

Meet the provisions of the Growth Management Ordinance (1.1d, Municipal Code 18.12)

Response : This revision to the building height would still meet the provisions of the Growth Management Ordinance by locating housing in an area adjacent to existing roadways and services. The project is an infill residential development with is encouraged within the Master Plan and provides convenient access to all community services and major roadways.

Encourage the use of sustainable building materials and construction techniques to promote water and energy conservation.

The building is designed to use regionally appropriate insulation and energy conserving materials. The building height increase will also include an increase of the floor and ceiling assemblies between the units. This will allow for a more efficient mechanical and insulation system to be installed, which is a more sustainable construction technique.

Located in a priority infill development area (1.2a)

The project site is not in a priority infill area, but it is an infill project. The proposed building height increase will not impact this requirement.

Provide pathway connections and easements consistent with the adopted Unified Pathways Master Plan and maintain access to adjacent public lands (1.4a)?

The project is too small to affect regional pathways, the proposed increase in height would have no change or impact to the regional pathways.

Protect existing site features including mature trees and other character-defining features (1.4c)?

There are no existing character-defining features or trees on site.

At adjacent county boundaries, coordinated with adjacent existing or planned development with regards to compatibility, access, and amenities (1.5a)?

The site is not located along a county boundary.

In identified Mixed-Use areas, promote mixed-use development patterns as appropriate for the surrounding context consistent with the land use descriptions of the applicable Mixed-Use

designation, and meet the intent of the Mixed-Use Evaluation Criteria (2.1b, 2.2b, 2.3b, Land Use Districts, Appendix C)?

The site is not within an identified mixed-use area. However, the area exhibits a mix of zoning and is close to existing retail and professional development.

Meet adopted standards for transitions between non-residential and residential zoning districts (2.1d)?

The project provides an effective transition between non-residential and single-family zoning through use of setbacks and similar use that matches the surrounding developments and neighborhoods. The proposed 3-foot height increase would be minimal, and the two-story apartments would still be similar to the surrounding neighborhoods.

Protect environmentally sensitive areas through proper setbacks, dedication, or other mechanisms (3.1b)?

There are no environmentally sensitive areas on the project site.

Site outside the primary floodplain and away from geologic hazard areas or follow the required setbacks or other mitigation measures (3.3d, e)?

The site will be designed using mitigation measures defined by Carson City Code, comparable to other new development in the area.

Provide for levels of services (i.e. water, sewer, road improvements, sidewalks, etc.) consistent with the Land Use designation and adequate for the proposed development (Land Use table descriptions)?

The site is already served by all utilities and city services. No decrease in service is to be expected.

If located within an identified Specific Plan Area (SPA), meet the applicable policies of that SPA (Land Use Map, Chapter 8)?

The site is not within a Specific Plan Area.

CHAPTER 4 : EQUITABLE DISTRIBUTION OF RECREATIONAL OPPORTUNITIES

The Carson City Master Plan seeks to continue providing a diverse range of park and recreational opportunities to include facilities and programming for all ages and varying interests to serve both existing and future neighborhoods.

Is or does the proposed amendment:

Provide park facilities commensurate with the demand created and consistent with the City's adopted standards (4.1b)?

The project will provide recreational amenities on site including outdoor play areas, a clubhouse, sport courts, and a dog run.

Consistent with the Open Space Master Plan and Carson River Master Plan (4.3a)?

The site is too small to affect overall public open space and has no impact on the River Master Plan.

CHAPTER 5 : ECONOMIC VITALITY

The Carson City Master Plan seeks to maintain its strong diversified economic base by promoting principles which focus on retaining and enhancing the strong employment base, include a broader range of retail services in targeted areas, and include the roles of technology, tourism, recreational amenities, and other economic strengths vital to a successful community.

Is or does the proposed amendment :

Encourage a citywide housing mix consistent with the labor force and non-labor force populations (5.1j)?

This project directly promotes this policy by adding additional housing close to existing employment centers. Furthermore, the addition in height to the building will increase the unit ceiling heights which is not a typical feature in apartment complexes due to the added expense of construction. This would add variation to the availability of unit types for both labor and non-labor force populations.

Encourage the development of regional retail centers (5.2b)?

This project does not include any retail, but it does support existing retail operations by locating customers close to local businesses. It could be argued that by adding housing availability to the community, companies will have a larger market base and would therefore be more likely to develop regional retail centers.

Encourage reuse or redevelopment of underused retail spaces (5.2b)?

By adding potential customers close to existing businesses, this project will encourage local retail. The apartments are being designed as higher end units, potentially encouraging customers ranging from a larger demographic.

Support heritage tourism activities, particularly those associated with historic resources, cultural institutions and the State Capitol (5.4a)?

There is little ability for this application to either negatively or positively affect heritage tourism activities.

Promote revitalization of the Downtown core (5.6a)?

By locating this project within the existing City boundary, it could be argued that it encourages greater use of nearby retail, including downtown businesses. However, it will have little direct impact on specific revitalization efforts.

Incorporate additional housing in and around the Downtown, including lofts, condominiums, duplexes, live-work units (5.6c)?

This project seeks to add additional housing close to the downtown area, encouraging walkability and tenant access to local retail.

CHAPTER 6 : LIVABLE NEIGHBORHOODS AND ACTIVITY CENTERS

The Carson City Master Plan seeks to promote safe, attractive and diverse neighborhoods, compact mixed-use activity centers, and a vibrant, pedestrian-friendly Downtown.

Is or does the proposed amendment :

Use durable, long-lasting building materials (6.1a)?

The project appearance will be commensurate with the surrounding area and will utilize durable materials that are suitable for the northern Nevada climate.

Promote variety and visual interest through the incorporation of varied building styles and colors, garage orientation and other features (6.1b)?

The included building elevation exhibits show that the project will provide contemporary new buildings with façade articulation, private balconies, and natural colors.

Promote variety and visual interest through the incorporation of well-articulated building facades, clearly identified entrances and pedestrian connections, landscaping and other features consistent with the Development Standards (6.1c)?

The included elevation exhibits show that the proposed buildings are articulated and provide visual appeal through the use of quality materials and color transitions. Pedestrian pathways and entrances will be obvious and well-marked. Generous open space and site landscaping will allow for an attractive site.

Provide appropriate height, density and setback transitions and connectivity to surrounding development to ensure compatibility with surrounding development for infill projects or adjacent to existing rural neighborhoods (6.2a, 9.3b, 9.4a)?

The project will be complementary to surrounding development in terms of height, setbacks and use will therefore be directly compatible. The project conforms to the setback requirements for projects adjacent to residential areas.

The proposed height increase for the apartments will be similar to surrounding apartment buildings in the neighborhood and will remain low profile with a maximum building height of 32'-6". The applicant is maintaining a two-story apartment building similar in height to the nearby Tanglewood Village Apartments to provide a cohesive look throughout the neighborhood.

The initial design was altered due to the height limitations which required lower ceiling heights, smaller floor/ceiling assemblies and lower roof pitches. If the city approves the height increase the architect and owner believe that the quality of design would be greatly improved for the community and for future tenants.

If located in an identified Mixed-Use Activity Center area, contain the appropriate mix, size and density of land uses consistent with the Mixed-Use district policies (7.1a,b)?

The project is not located in a mixed-use activity center.

If located Downtown:

Integrate an appropriate mix and density of uses (8.1a,e)?

The project is not located within the identified Downtown Core.

Include buildings at the appropriate scale for the applicable Downtown Character Area (8.1b)?

The project is not located Downtown.

Incorporate appropriate public spaces, plazas and other amenities (8.1d)?

The project is not located downtown however it does include several amenities.

Incorporate a mix of housing models and densities appropriate for the project location and size (9.1a)?

The project is consistent with development in the area, both on the project site and on adjoining property. The project is comparable to existing multi-family development in the area.

CHAPTER 7 : A CONNECTED CITY

The Carson City Master Plan seeks to promote a sense of community by linking its many neighborhoods, employment areas, activity centers, parks, recreational amenities and schools with an extensive system of interconnected roadways, multi-use pathways, bicycle facilities, and sidewalks.

Is or does the proposed amendment:

Promote transit-supportive development patterns (e.g. mixed-use, pedestrian-oriented, higher density along major travel corridors to facilitate future transit (11.2b)?

The project is located along existing streets and is close to major arterials. The site is therefore suitable for accessing public transit and for pedestrian travel.

Maintain and enhance roadway connections and networks consistent with the Transportation Master Plan (11.2c)?

The project is accessed by the existing roadway network and provides development close to major arterial roadways.

Provide appropriate pathways through the development and to surrounding lands, including parks and public lands, consistent with the Unified Pathways Master Plan and the proposed use and density (12.1a,c)

The project is too small to impact local trails or pathways, but the project will have full site circulation to the open areas and apartment amenities.

2. Will not be detrimental to the use, peaceful enjoyment, economic value, or development of surrounding properties or the general neighborhood; and will cause no objectionable noise, vibrations, fumes, odors, dust, glare or physical activity.

The proposed increase in height would be relatively minor in nature and because the apartment buildings exceed the minimum building setback, the project still meets or exceeds city requirements. The project is comparable to surrounding development, including an existing multi-family site to the north, across Little Lane. The project therefore preserves the local character by including a land use that is already present in the area and has been found to be compatible. The project meets or exceeds all setback, building mass, and density regulations.

3. Will have little or no detrimental effect on vehicular or pedestrian traffic.

The site coverage has not increased and the site lines at the corner of Janas Way is being maintained, therefore no vehicular or pedestrian traffic will be impeded.

4. Will not overburden existing public services and facilities, including schools, police and fire protection, water, sanitary sewer, public roads, storm drainage and other public improvements.

The increased building height will not provide an additional burden to the existing public services and facilities. The applicant will continue to work with Carson City Engineering to ensure the project conforms to all local standards as required.

5. Meets the definition and specific standards set forth elsewhere in Carson City Municipal Code, Title 18 for such particular use and meets the purpose statement of that district.

The project team has reviewed the Carson City Municipal Code, including Title 18 Appendix Section 1.18 Residential Development in Non-Residential Districts; and Section 18.04.195 Non-Residential Districts Intensity and Dimensional Standards. The project conforms to the standards outlined in these sections.

6. Will not be detrimental to the public health, safety, convenience and welfare.

The project has been designed for higher end finishes and quality living with community open space and recreation. The increase in building height would only increase these benefits by providing better air and light quality.

7. Will not result in material damage or prejudice to other property in the vicinity, as a result of proposed mitigation measures.

Response : The project will not result in damage to other properties. The buildings conform to required setbacks, including increased distances from the existing residential areas. Generous landscaping will ensure an attractive site. Traffic impacts are adequately managed by the existing road network.

LITTLE LANE SPECIAL USE PERMIT

SUP Findings

Carson City Municipal Code Section 18.02.080(5) FINDINGS, establishes legal findings that must be made to approve a Special Use Permit. These findings are listed below *in italics*, followed by a response.

1. Will be consistent with the objectives of the Master Plan elements.

Response: Master Plan policy analysis is provided in the section immediately following these SUP Findings. This project promotes many of the objectives of the Master Plan, including: infill development; an improved variety of housing options; housing affordability; and locating of housing close to existing services and employment areas.

2. Will not be detrimental to the use, peaceful enjoyment, economic value, or development of surrounding properties or the general neighborhood; and is compatible with and preserves the character and integrity of adjacent development and neighborhoods or includes improvements or modifications either on-site or within the public right-of-way to mitigate development related to adverse impacts such as noise, vibrations, fumes, odors, dust, glare or physical activity.

Response: The project is comparable to surrounding development, including an existing multi-family site to the north, across Little Lane. The project therefore preserves the local character by including a land use that is already present in the area and has been found to be compatible. The project meets or exceeds all setback, building mass, and density regulations.

The project includes generous landscaping area, well in excess of the base requirement. The outdoor recreation areas will be a healthy amenity for residents and will be visually appealing to the neighborhood. Site lighting will be the minimum consistent with public safety and pedestrian movement.

3. Will have little or no detrimental effect on vehicular or pedestrian traffic.

Response: A traffic impact analysis was completed as part of this application and is included here. Nearby intersections operate at service levels A, B, and C. With the project, these nearby intersections will continue to operate at levels A, B, and C. Note that Carson City's service level target is Level D so these intersections will remain above target with this project. It is estimated the project will produce an average of 59 AM peak hour trips and 72 PM peak hour trips.

In short, the project site is too small to have a substantial impact on area traffic.

4. Will not overburden existing public services and facilities, including schools, police and fire protection, water, sanitary sewer, public roads, storm drainage and other public improvements.

Response: As an infill site, the project does not expand the service boundary for area providers such as police and fire departments. The site is surrounded by development and is therefore already being served by

these departments.

The project team is familiar with local infrastructure conditions and has not identified any service deficiencies in the area. Water and sewer service are available adjacent to the site and can be extended to the new project. The project team is continuing to work with Carson City Engineering to ensure the project conforms to local standards.

No new road construction is required with this project.

5. Meets the definition and specific standards set forth elsewhere in Carson City Municipal Code, Title 18 for such particular use and meets the purpose statement of that district.

Response: The project team has reviewed the Carson City Municipal Code, including: Title 18 Appendix Section 1.18 Residential Development in Non-Residential Districts; and Section 18.04.195 Non-Residential Districts Intensity and Dimensional Standards. The project conforms to the standards outlined in these sections as detailed in this report.

6. Will not be detrimental to the public health, safety, convenience and welfare.

Response: The project will be an attractive apartment development in an area of mixed uses, including other apartments. This type of use is therefore already present in the area and has not been found to be detrimental. The contemporary appearance of the buildings combined with the appealing outdoor amenities and landscaping will be an enhancement to the area.

7. Will not result in material damage or prejudice to other property in the vicinity, as a result of proposed mitigation measures.

Response: The project will not result in damage to other properties. The buildings conform to required setbacks, including increased distances from existing residential areas. Generous site landscaping will ensure an attractive site. Traffic impacts are adequately managed by the existing road network.



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**308 N. Curry St, Suite 200
Carson City, NV 89703**

March 17, 2021

JN 9801.001

Technical Memorandum

Carson City Planning Division
108 E. Proctor St.
Carson City, NV 89701

**Subject: Little Lane Apartments (APN 004-015-06)
Technical Drainage Memorandum**

This technical memorandum is presented as a drainage study in support of the proposed site layout revisions to the proposed Little Lane Apartments development (APN 004-015-06) originally prepared for Clark RSF Enterprises and submitted for permitting. Minor site layout changes are being proposed by the developer, Kingsbarn, consistent with the attached drainage exhibit and revised Special Use Permit (SUP) plan set. This memorandum is being submitted with the revised plans for Special Use Permit review to outline the impacts of the changes to the Technical Drainage Study for Little Lane Apartments, dated June 2020.

The proposed changes to the previously approved site layout will not change the weighted curve number presented in the previously submitted Technical Drainage Study for this project. Porous pavers will be utilized in multiple parking areas across the site to offset increased impervious surface areas and ensure that the weighted curve number remains the same. Please refer to the attached exhibit for the revised drainage plan exhibit. Therefore, the drainage design, runoff flow, detention volume, outlet pipe, weir design, and channel calculations that were previously approved will not change and will not need to be updated with the revised site layout.

If you have any questions, please do not hesitate to contact me at 775.588.6490.

Sincerely,

Justin Sand, P.E.
Project Manager



3/17/21

REV	DATE	DESCRIPTION	BY

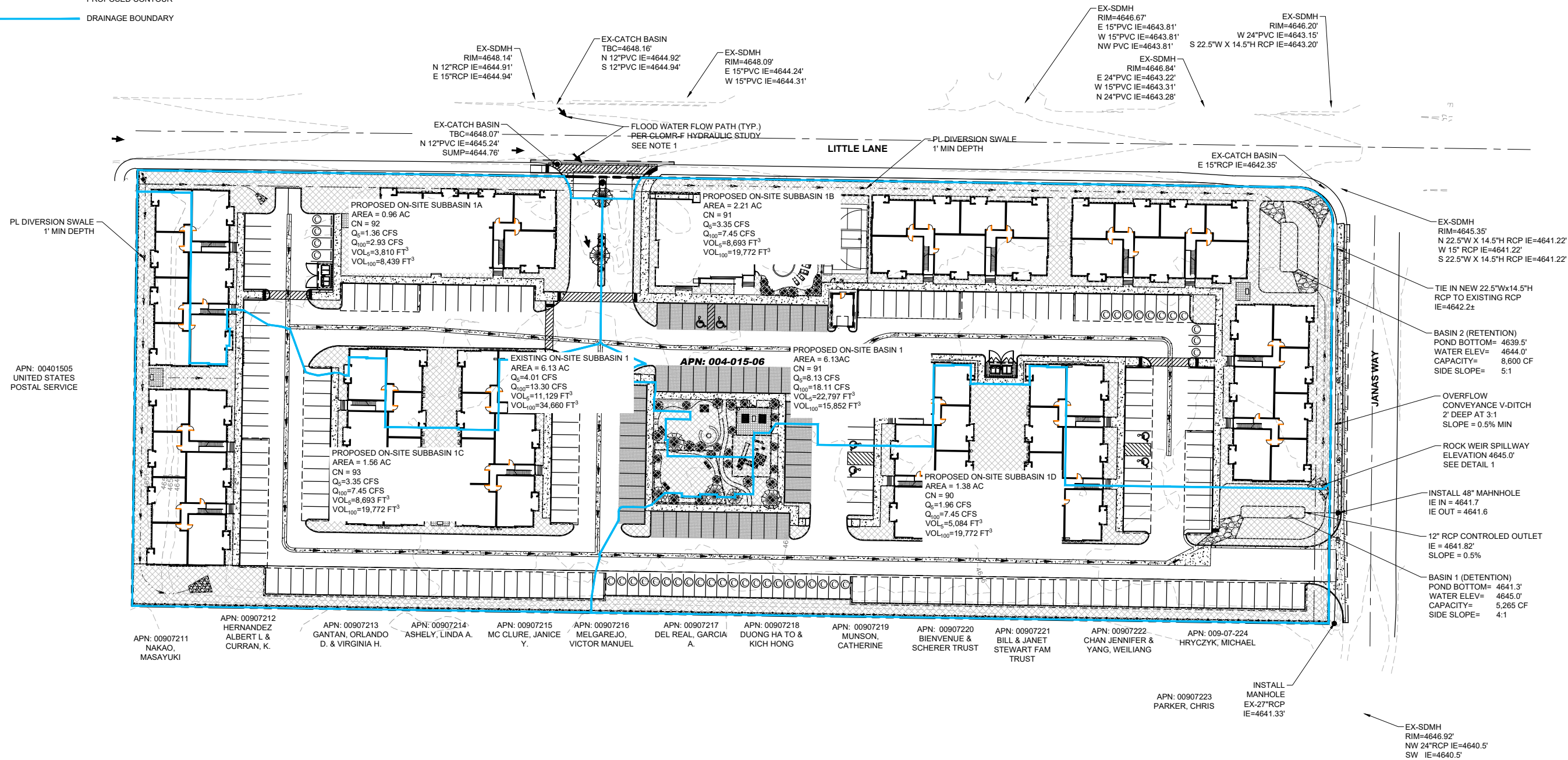
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IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

FIG. 1

DRAWN BY: RTS
DESIGNED BY: RTS
CHECKED BY: JS
JOB NO.: 9801.000

LEGEND

- EX SD EXISTING SD LINE
- SD PROPOSED SD LINE
- PROPOSED FLOW PATH
- LANDSCAPE/PERVIOUS AREA
- EX CONTOUR
- PROPOSED CONTOUR
- DRAINAGE BOUNDARY



NOTES:

- THE PROJECT SITE IS LOCATED WITHIN FEMA FLOOD ZONE AO WITH AVERAGE DEPTHS OF 1 TO 2 FEET. REFER TO THE CONDITIONAL LETTER OF MAP REVISION BASED ON FILL (CLOMR-F) PREPARED AND SUBMITTED BY HOUSE MORAN CONSULTING DATED FEB. 2020 FOR ADDITIONAL FLOOD ZONE INFORMATION.



Carson City
308 N. Curry Street, Suite 200
Carson City, Nevada 89703
775.883.7077

March 16, 2021

**Subject: Little Lane Apartments, APN 004-015-06
Special Use Permit Revised Submittal – Water Impact Memo Update**

To whom it may concern,

A Special Use Permit (SUP) was submitted for the Little Lane Apartments project on September 19, 2019. This letter serves as a description of the revisions to the site and the resultant impacts on the water system for updates made in the updated SUP submittal. Table 1 details changes to the design with this submittal.

Table 1: Design Changes

	Original Design (2019)	Updated Design (2021)
1-Bedroom Units	42	80
2-Bedroom Units	84	60
Total Units	126	140
Estimated Domestic Demand¹	21,000 gpd	20,000 gpd
Estimated Irrigation Demand²	1,154 gpd	TBD
Required Fire Flow	1,500 gpm for 2 hours	1,625 gpm for 3 hours

¹Domestic demand was determined during the permitting process in 2020. Demand for the updated design is estimated and will be verified during the permitting process.

²Irrigation demand for the updated design will be determined during the permitting process but is anticipated to be similar to the original design.

Lumos is in the process of obtaining an updated Water System Impact Memo from Carson City Public Works. However, it is anticipated that the updated design will not have negative impacts on Carson City's water system due to the relatively minor net change to water demand.

If you have any questions, please do not hesitate to contact me at 775.883.7077.

Sincerely,

Mara Quiroga, P.E.
Project Engineer

Attachments:

Water System Impact Memo dated September 12, 2019
Updated Fire Flow Calculations



CARSON CITY NEVADA
Consolidated Municipality and State Capital
PUBLIC WORKS

MEMORANDUM

To: Mara Quiroga, P.E., Lumos and Associates

From: Tom Grundy, P.E., Water Operations Supervisor *TG*

Subject: Little Lane Apartments, APN 004-015-06
Water System Impact Memo

Date: September 12, 2019

I have reviewed the "Little Lane - Schematic Site Plan" dated 9/10/19 by Novak Architecture showing a 125 unit apartment complex with clubhouse and pool proposed to be located on APN 004-015-06.

Based on the information provided, I believe the Carson City Municipal Water System can meet the domestic and irrigation demands of the proposed project.

Regarding fire flows, the required fire flow for the project was not provided. The Carson City Water model indicates the available fire flow in the area is in excess of 2,000 gpm.



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308 N. Curry Street, Suite 200
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775.883.7077

March 16, 2021

**Subject: Little Lane Apartments, APN 004-015-06
Fire Flow Calculations – Revision 1**

Construction Information

Apartment Buildings

13,774 SF each (Type V-B)

With sprinklers

Clubhouse

3,300 SF (Type V-B)

With sprinklers

2018 International Fire Code

Apartment Buildings (With Sprinklers)

Table B105.1(2)

Type V-B and 13,774 SF → 3,250 for 3 hours

Table B105.2

50% of flow value from Table B105.1(2), minimum 1,500 gpm

50% of 3,250 gpm = 1,625 gpm for 3 hours

Clubhouse (With Sprinklers)

Table B105.1(2)

Type V-B and 3,300 SF → 1,500 for 2 hours

Table B105.2

50% of flow value from Table B105.1(2), minimum 1,500 gpm

50% of 1,500 gpm = 750 gpm → use 1,500 gpm for 2 hours

Therefore, the required fire flow is **1,625 gpm for 3 hours.**



March 16, 2021

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775.883.7077

Carson City Planning Division
108 E. Proctor Street
Carson City, NV 89701

**Subject: Little Lane Apartments Special Use Permit
Sanitary Sewer System Impact Letter – Revision 1**

Introduction

The proposed Little Lane Apartments are located on 6.13 acres on Little Lane and Janas Way (APN 004-015-06). The apartments will consist of 140 units, a clubhouse, and a pool. This letter provides a preliminary analysis of the impact of this proposed project on the existing sanitary sewer system.

Current Capacity

The project will connect to the Carson City sewer system at a 15" main in Little Lane that flows west to east. Based on information obtained from the Carson City Public Works sewer model in June 2020, the existing downstream interceptor has the following characteristics.

- Diameter: 15"
- Max flow: 0.4716 MGD
- Depth of flow d/D: 30.5%
- Slope: 0.00291 ft/ft

Proposed Sewer Generation

The Carson City Municipal Code Section 12.06.280 states the following requirements

- Flow generation
 - Average Daily Flow: 150 gallons per capita per day (gpcd)
 - Peak Design Flow: 300 gpcd
 - 60 capita per acre (368 capita for project)
 - Infiltration from high water table: 200 gal/acre/day
- Maximum Flow Depth d/D: 50% for main diameters of 15" and less

Based on these criteria, which we believe to be conservative, the proposed development will result in an additional 111,566 gallons per day (gpd) peak flow. Attachment A shows the calculations for the interceptor with the additional flow, resulting in a flow depth of 5.21 inches, or 35% d/D. This meets the maximum allowable 50% d/D.

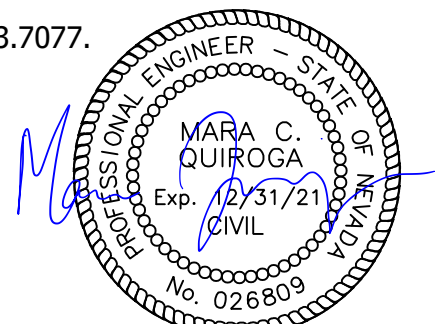
Conclusion

The preliminary analysis indicates the existing interceptor has the capacity to accommodate the proposed project without exceeding maximum flow depth.

If you have any questions, please do not hesitate to contact me at 775.883.7077.

Sincerely,

Mara Quiroga, P.E.
Project Engineer



Attachment A

Interceptor with Proposed Flows

Project Description	
Friction Method	Manning
Solve For	Formula
	Normal Depth
Input Data	
Roughness Coefficient	0.013
Channel Slope	0.00291 ft/ft
Diameter	15.0 in
Discharge	583,166.00 gpd
Results	
Normal Depth	5.21 in
Flow Area	0.4 ft ²
Wetted Perimeter	1.6 ft
Hydraulic Radius	2.88 in
Top Width	1.19 ft
Critical Depth	4.47 in
Percent Full	34.7 %
Critical Slope	0.00521 ft/ft
Velocity	2.38 ft/s
Velocity Head	0.09 ft
Specific Energy	0.52 ft
Froude Number	0.745
Maximum Discharge	2,422,593.59 gpd
Discharge Full	2,252,096.66 gpd
Slope Full	0.00020 ft/ft
Flow Type	Subcritical
GVF Input Data	
Downstream Depth	0.00 in
Length	0.0 ft
Number Of Steps	0
GVF Output Data	
Upstream Depth	0.00 in
Profile Description	N/A
Profile Headloss	0.00 ft
Average End Depth Over Rise	0.0 %
Normal Depth Over Rise	0.0 %
Downstream Velocity	0.00 ft/s
Upstream Velocity	0.00 ft/s
Normal Depth	5.21 in
Critical Depth	4.47 in
Channel Slope	0.00291 ft/ft
Critical Slope	0.00521 ft/ft

No Personal Exemptions

Billing Fiscal Year (2020 - 2021)

Installment	Date Due	Date Paid	Tax Billed	Cost Billed	Penalty/Interest	Total Due	Amount Paid	Total Unpaid
1	8/17/2020	8/27/2020	\$724.44	\$0.00	\$0.00	\$724.44	\$724.44	\$0.00
2	10/5/2020	8/27/2020	\$724.06	\$0.00	\$0.00	\$724.06	\$724.06	\$0.00
3	1/4/2021	8/27/2020	\$724.06	\$0.00	\$0.00	\$724.06	\$724.06	\$0.00
4	3/1/2021	8/27/2020	\$724.06	\$0.00	\$0.00	\$724.06	\$724.06	\$0.00
Total			\$2,896.62	\$0.00	\$0.00	\$2,896.62	\$2,896.62	\$0.00

Payment History

	Fiscal Year	Total Due	Total Paid	Amount Unpaid	Date Paid
+	(2020 - 2021)	\$2,896.62	\$2,896.62	\$0.00	8/27/2020
+	(2019 - 2020)	\$2,824.05	\$2,824.05	\$0.00	9/19/2019
+	(2018 - 2019)	\$2,747.84	\$2,747.84	\$0.00	3/18/2019
+	(2017 - 2018)	\$2,611.61	\$2,611.61	\$0.00	3/8/2018
+	(2016 - 2017)	\$2,702.91	\$2,702.91	\$0.00	5/8/2017
+	(2015 - 2016)	\$2,542.57	\$2,542.57	\$0.00	3/17/2016
+	(2014 - 2015)	\$2,465.30	\$2,465.30	\$0.00	3/26/2015
+	(2013 - 2014)	\$2,344.48	\$2,344.48	\$0.00	1/7/2014
+	(2012 - 2013)	\$2,272.49	\$2,272.49	\$0.00	8/22/2012
+	(2011 - 2012)	\$2,114.35	\$2,114.35	\$0.00	8/9/2011
+	(2010 - 2011)	\$2,088.83	\$2,088.83	\$0.00	8/18/2010
+	(2009 - 2010)	\$1,889.67	\$1,889.67	\$0.00	8/17/2009
+	(2008 - 2009)	\$1,752.94	\$1,752.94	\$0.00	8/18/2008
+	(2007 - 2008)	\$1,623.09	\$1,623.09	\$0.00	1/2/2008
+	(2006 - 2007)	\$1,529.20	\$1,529.20	\$0.00	1/9/2007
+	(2005 - 2006)	\$1,417.68	\$1,417.68	\$0.00	12/29/2005
+	(2004 - 2005)	\$1,417.74	\$1,417.74	\$0.00	10/6/2004
+	(2003 - 2004)	\$1,410.50	\$1,410.50	\$0.00	3/4/2004
+	(2002 - 2003)	\$1,384.97	\$1,384.97	\$0.00	8/8/2002
+	(2001 - 2002)	\$1,384.05	\$1,384.05	\$0.00	1/7/2002
+	(2000 - 2001)	\$1,094.09	\$1,094.09	\$0.00	8/21/2000
+	(1999 - 2000)	\$1,145.77	\$1,145.77	\$0.00	9/29/1999
+	(1998 - 1999)	\$1,154.03	\$1,154.03	\$0.00	8/6/1998
+	(1997 - 1998)	\$1,184.51	\$1,184.51	\$0.00	10/7/1997
+	(1996 - 1997)	\$1,182.56	\$1,182.56	\$0.00	8/29/1996
Collapse					

SHEET NOTES

LITTLE LANE APARTMENT & CLUBHOUSE

CARSON CITY, NEVADA



PROJECT SUMMARY

PROJECT SUMMARY	
WORK SCOPE:	NEW CONSTRUCTION OF 10 APARTMENT BUILDINGS AND 1 CLUBHOUSE
JURISDICTION:	CARSON CITY, NEVADA
ZONING:	NB (NEIGHBORHOOD BUSINESS)
BUILDING AREA:	APARTMENTS: EACH 13,774 S.F. TOTAL (10 BLDGS) 137,740 S.F. CLUBHOUSE: 3,300 S.F. MAINTENANCE BLDG: 384 S.F.
TOTAL LOT COVERAGE:	73,430 S.F.
OCCUPANCY GROUP:	R-2

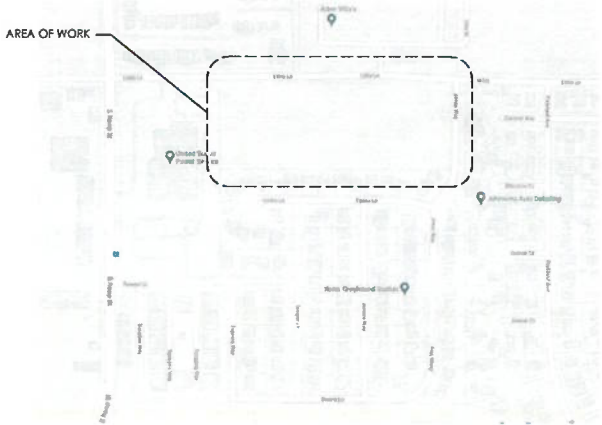
DIRECTORY

OWNER / DEVELOPER	
KINGSBARN REALTY CAPITAL CARSON CITY, NEVADA	
ARCHITECT	
TERRY J NOVAK, ARCHITECT PO BOX 4667 TUALATIN, OREGON 97062 CONTACT: TERRY J NOVAK T: (503) 352-4987 E: tnovak@novakarchitecture.com	

SHEET INDEX

ARCHITECTURAL	
A000	COVER SHEET
A101	ORIGINAL & PROPOSED SITE PLAN
A201	ORIGINAL & PROPOSED FLOOR PLAN - APPTS
A202	ORIGINAL & PROPOSED FLOOR PLAN - CLUBHOUSE
A301	ORIGINAL & PROPOSED COLORED ELEVATIONS
A302	ORIGINAL & PROPOSED COLORED ELEVATIONS

VICINITY MAP



SHEET NOTES



LITTLE LANE APARTMENTS & CLUBHOUSE
CARSON CITY, NV

KINGSBARN REALTY CAPITAL
LAS VEGAS, NV

project number	19-15
date	3/4/2021
revisions	

KEY NOTES

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MAR 18 2021

CARSON CITY
PLANNING DIVISION

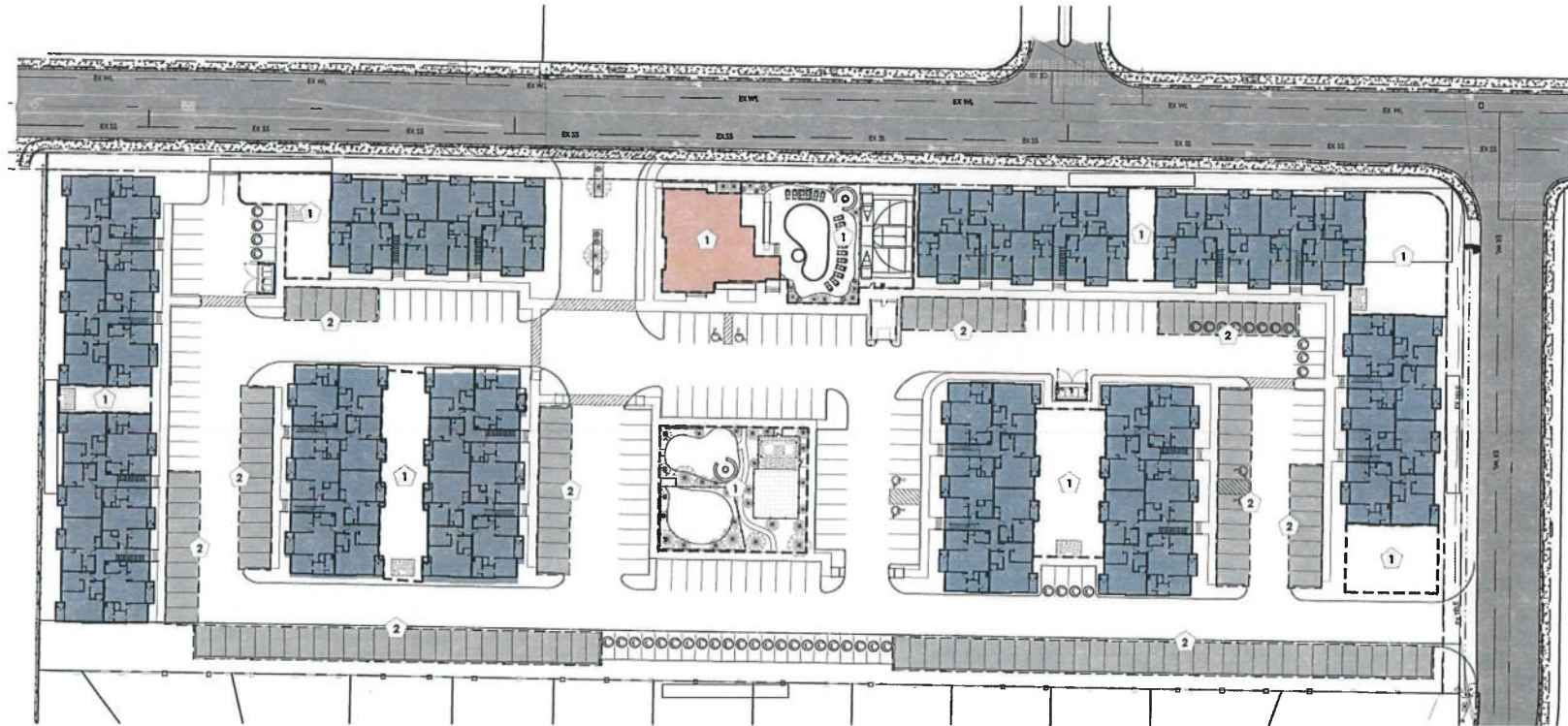
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sheet number

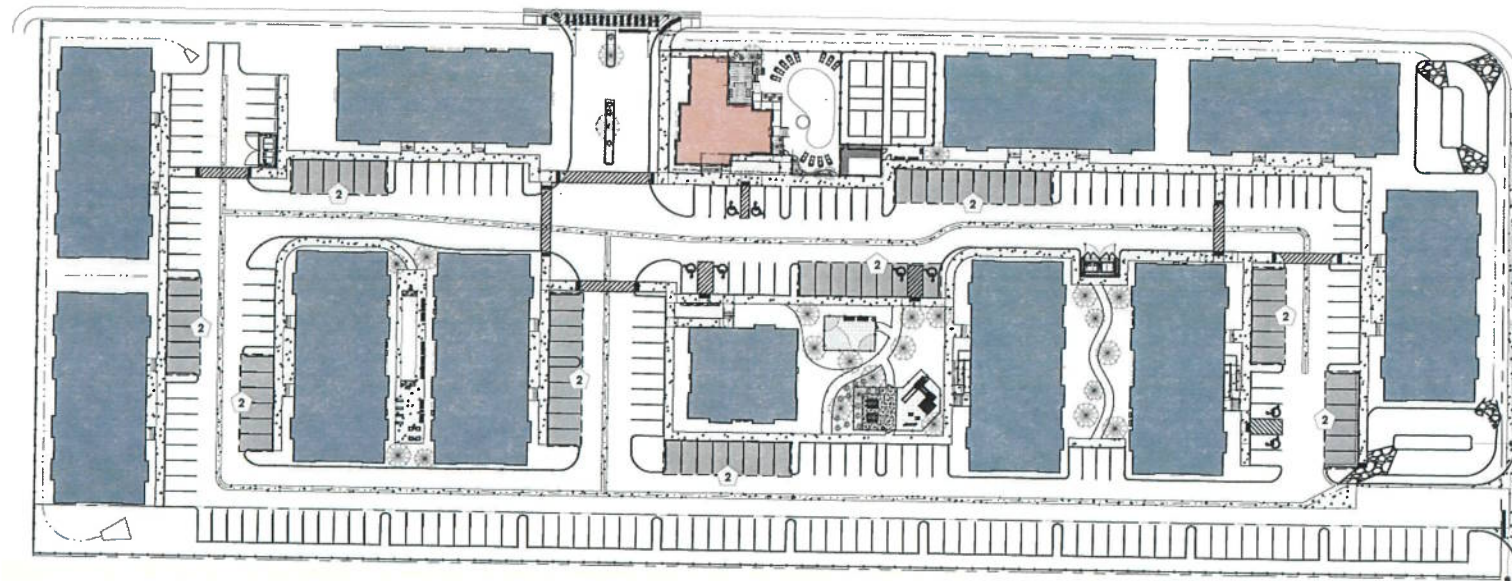
A000



SITE PLAN SUMMARY		BUILDING TYPE KEY: <div>APARTMENTS</div> <div>CLUBHOUSE</div>								
		PARKING					OPEN SPACE AREA		TOTAL APARTMENT S.F. ON SITE	CLUBHOUSE S.F.
# OF UNITS	UNIT/PARKING RATIO	REQUIRED SPACES	PROVIDED SPACES	PROVIDED COVERED SPACES	TOTAL REQUIRED	TOTAL PROVIDED				
PROPOSED SITE PLAN	140 UNITS	1:2	280 SPACES	280 SPACES	140 SPACES	35,000 S.F.	39,152 S.F.	137,740 S.F.	3.300 S.F.	73.430 S.F.
ORIGINAL SITE PLAN	126 UNITS	1:2	252 SPACES	253 SPACES	65 SPACES	31,500 S.F.	39,688 S.F.	139,718 S.F.	2.293 S.F.	72.112 S.F.



PROPOSED SITE PLAN
SCALE: 1" = 50'-0"



ORIGINAL SITE PLAN
SCALE: 1" = 50'-0"



KEY NOTES

- 1 DASHED LINE INDICATES OPEN SPACE AREA
- 2 SHADED AREA INDICATES COVERED PARKING

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<hr/>	
revisions	

LITTLE LANE APARTMENTS & CLUBHOUSE
CARSON CITY, NV

KINGSBARN REALTY CAPITAL
LAS VEGAS, NV

ORIGINAL &
PROPOSED
SITE PLAN

sheet number

A101

FLOOR PLAN SUMMARY

SHEET NOTES

FLOOR PLAN SUMMARY

	TOTAL S.F. PER BUILDING	# OF UNITS PER BUILDING		# OF BLDGS ON SITE	# OF UNITS ON SITE		
		1 BEDROOM	2 BEDROOMS		1 BEDROOM	2 BEDROOMS	TOTAL
PROPOSED FLOOR PLAN	13,774 S.F.	8 UNITS (57.1%)	6 UNITS (42.9%)	10 BUILDINGS	80 UNITS (57.1%)	60 UNITS (42.9%)	140 UNITS
ORIGINAL FLOOR PLAN	13,292 S.F.	4 UNITS (33.3%)	8 UNITS (66.6%)	10 BUILDINGS	42 UNITS (33.3%)	84 UNITS (66.6%)	126 UNITS

BUILDING TYPE KEY: 1 BED 2 BED

SHEET NOTES



LITTLE LANE APARTMENTS & CLUBHOUSE
CARSON CITY, NV

KINGSBARN REALTY CAPITAL
LAS VEGAS, NV

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revisions

KEY NOTES

ORIGINAL &
PROPOSED FLOOR
PLAN - APPTS

sheet number

A201

A

B

C

C1 PROPOSED FLOOR PLAN - APARTMENTS 13,774 S.F. TOTAL
SCALE: 1/8" = 1'-0"

D

E

E1 ORIGINAL FLOOR PLAN - APARTMENTS 13,292 S.F. TOTAL
SCALE: 1/8" = 1'-0"



SHEET NOTES



SHEET NOTES



LITTLE LANE APARTMENTS & CLUBHOUSE
CARSON CITY, NV

KINGSBARN REALTY CAPITAL
LAS VEGAS, NV

project number 19-15
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revisions

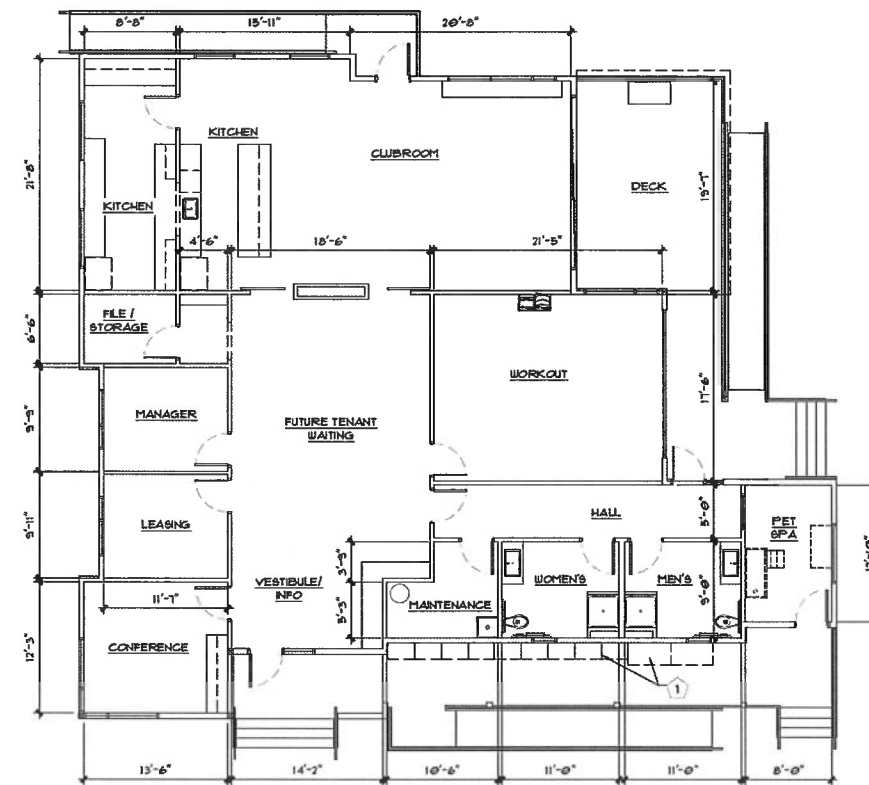
KEY NOTES

- 1 COVERED MAILBOXES AND AMAZON LOCKERS

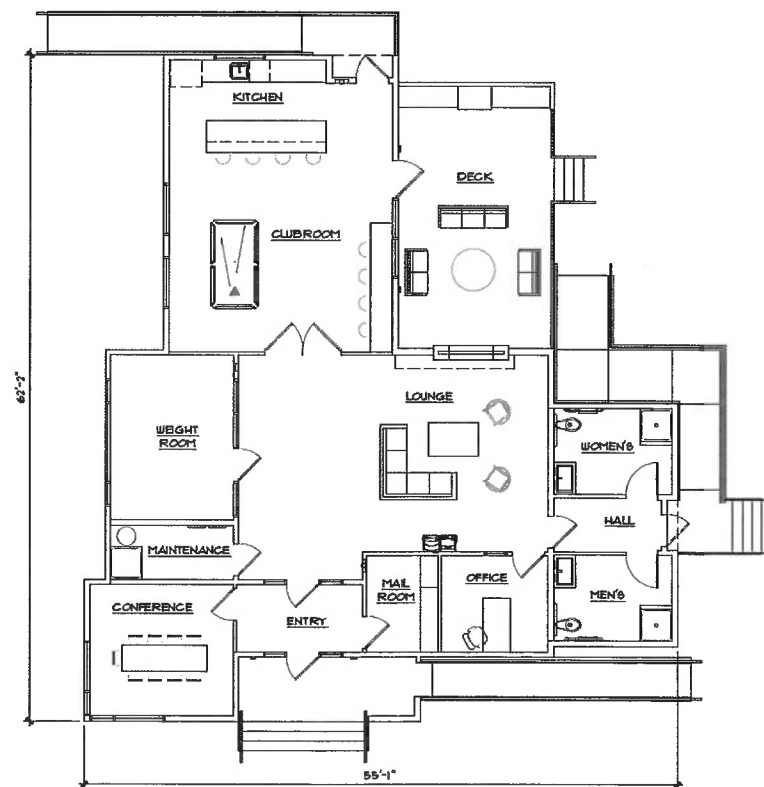
ORIGINAL &
PROPOSED FLOOR
PLAN - CLUBHOUSE

sheet number

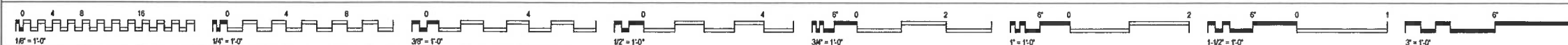
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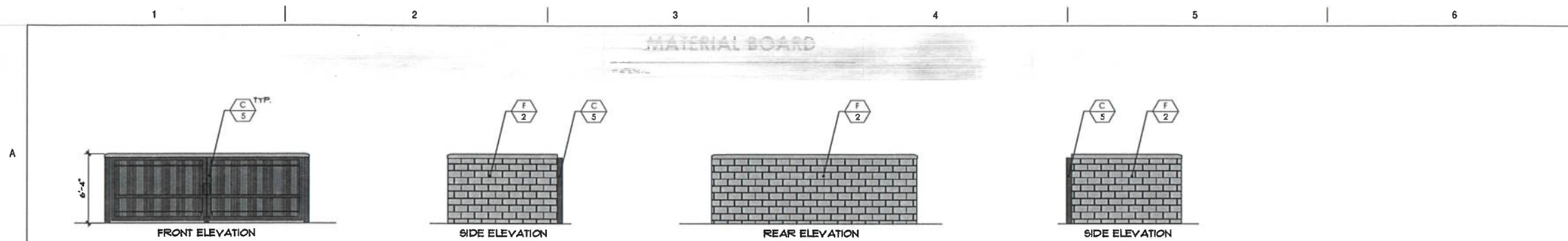


C4 PROPOSED FLOOR PLAN - CLUBHOUSE 3,300 S.F.
SCALE: 1/8" = 1'-0"



E1 ORIGINAL FLOOR PLAN - CLUBHOUSE 2,253 S.F.
SCALE: 1/8" = 1'-0"





A1 PROPOSED COLORED ELEVATIONS - TRASH ENCLOSURE
SCALE: 3/16" = 1'-0"



C1 PROPOSED COLORED ELEVATIONS - APARTMENT
SCALE: 1/8" = 1'-0"



E1 ORIGINAL COLORED ELEVATIONS - APARTMENT
SCALE: 1/8" = 1'-0"



MATERIAL BOARD

MATERIAL
A - STUCCO
B - MASONRY
C - METAL POSTS / BRACING
D - STANDING SEAM METAL AWINGS
E - CONCRETE ROOF TILES
F - CMU BLOCKS
G - EXPOSED CONCRETE

COLOR

1 - METRO GRAY 1489 BENJAMIN MOORE
2 - SILVER DOLLAR 1460 BENJAMIN MOORE
3 - STERLING SILVER 1461 BENJAMIN MOORE
4 - STACKED STONE / ALDERWOOD ELDERADO STONE
5 - BLACK
6 - BLACK 691-29 TAYLOR METAL PRODUCTS, INC.
7 - SANDY 300 SLATE - CHARCOAL BORAL

KEY NOTES



LITTLE LANE APARTMENTS & CLUBHOUSE
CARSON CITY, NV

KINGSBARN REALTY CAPITAL
LAS VEGAS, NV

project number 19-15
date 3/4/2021
revisions

ORIGINAL & PROPOSED COLORED ELEVATIONS

sheet number

A301



MATERIAL BOARD



MATERIAL BOARD

- MATERIAL**
- A STUCCO
 - B MASONRY
 - C METAL POSTS
 - D STANDING SEAM METAL AWINGS
 - E CONCRETE ROOF TILES
 - F CMU BLOCKS
 - G EXPOSED CONCRETE

- COLOR**
- 1 METRO GRAY 1409 BENJAMIN MOORE
 - 2 SILVER DOLLAR 1460 BENJAMIN MOORE
 - 3 STERLING SILVER 1441 BENJAMIN MOORE
 - 4 STACKED STONE / ALDERWOOD ELDERADO STONE
 - 5 BLACK
 - 6 BLACK 885-25 TAYLOR METAL PRODUCTS, INC.
 - 7 SMOKEY 500 SLATE - CHARCOAL BORAL

KEY NOTES

- 1 COVERED MAILBOXES AND AMAZON LOCKERS

ORIGINAL &
PROPOSED COLORED
ELEVATIONS

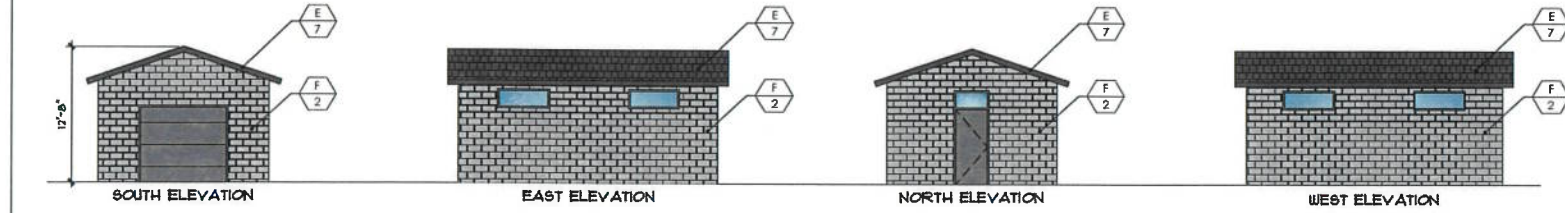
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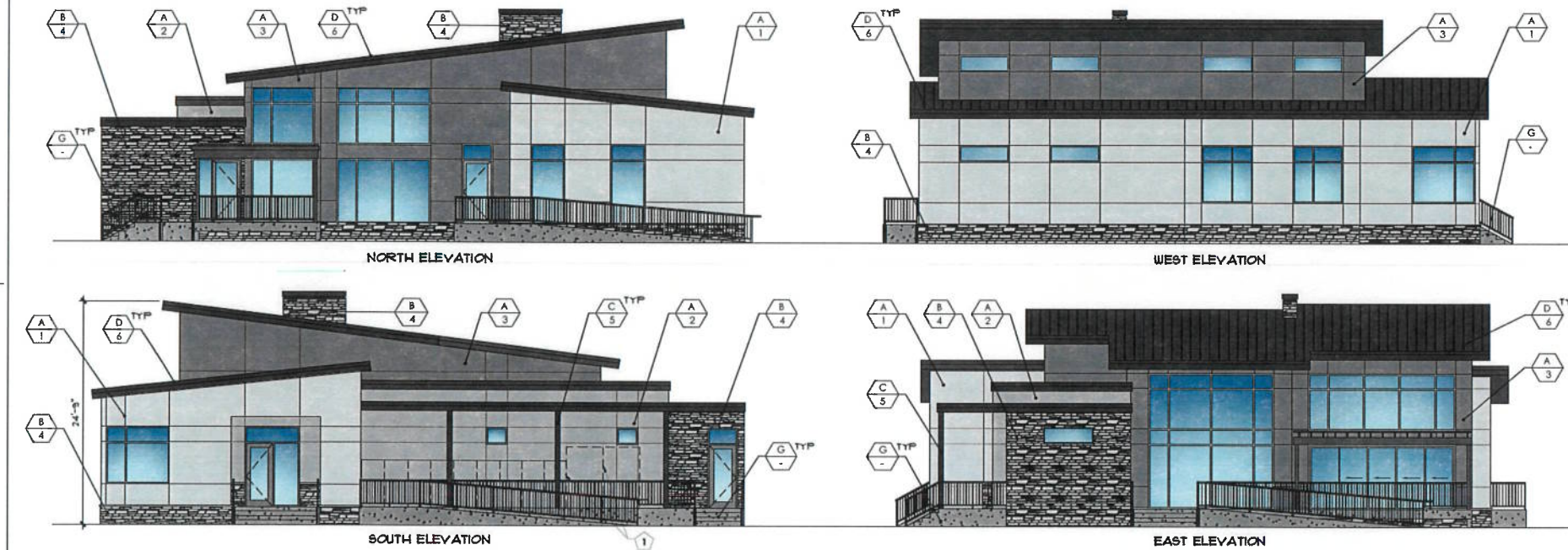
LITTLE LANE APARTMENTS & CLUBHOUSE
CARSON CITY, NV

KINGSBARN REALTY CAPITAL
LAS VEGAS, NV

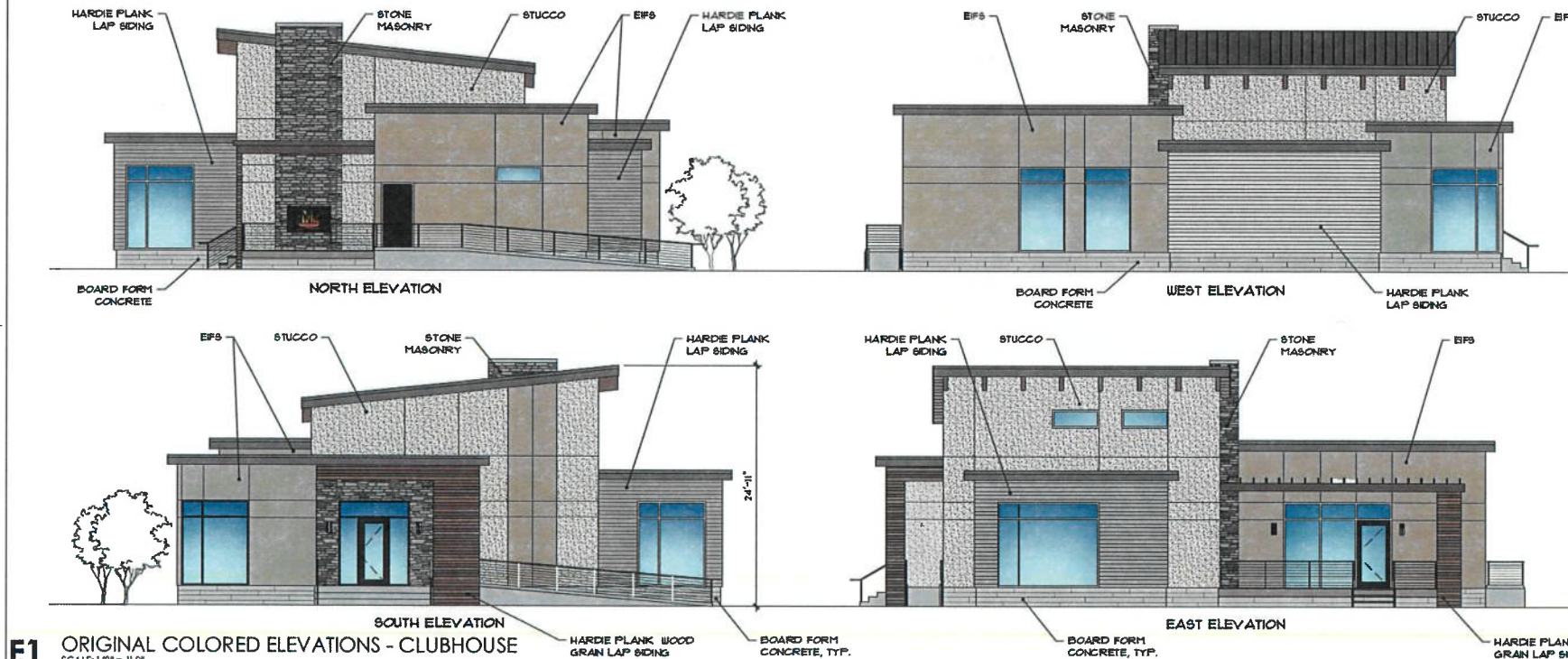
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revisions



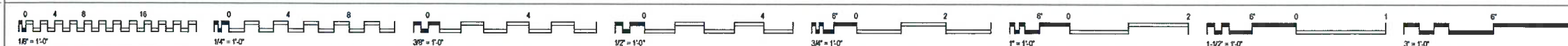
A1 PROPOSED COLORED ELEVATIONS - MAINTENANCE BUILDING
SCALE: 1/8" = 1'-0"



C1 PROPOSED COLORED ELEVATIONS - CLUBHOUSE
SCALE: 1/8" = 1'-0"



E1 ORIGINAL COLORED ELEVATIONS - CLUBHOUSE
SCALE: 1/8" = 1'-0"



PROJECT CONTROL

POINT	NORTH	EAST	ELEVATION	DESCRIPTION
CC021	14732972.70	2291303.72	4650.70	2" BRASS CAP
500	14732935.61	2292395.18	4645.88	SCRIBED X
502	14733020.05	2291962.37	4647.91	SCRIBED X
503	14732676.03	2292443.58	4647.13	MAG NAIL & SHINER
504	14733026.37	2291542.29	4649.34	SCRIBED X
505	14732975.73	2291616.24	4649.26	SCRIBED X

BASIS OF BEARINGS

THE BASIS OF BEARINGS FOR THIS SURVEY IS NEVADA STATE PLANE COORDINATE SYSTEM, WEST ZONE NAD83(94) CARSON CITY DATUM, BASED UPON REAL TIME KINEMATIC GPS OBSERVATIONS, OBSERVED MAY 30, 2019 USING A SURVEY GRADE DUAL FREQUENCY GPS RECEIVER FROM CC021 MODIFIED BY A COMBINED FACTOR OF 1.0002, SCALED FROM 0.00N .000E AND CONVERTED TO U.S. SURVEY FEET. ALL DIMENSIONS ON THIS MAP ARE GROUND DISTANCES.

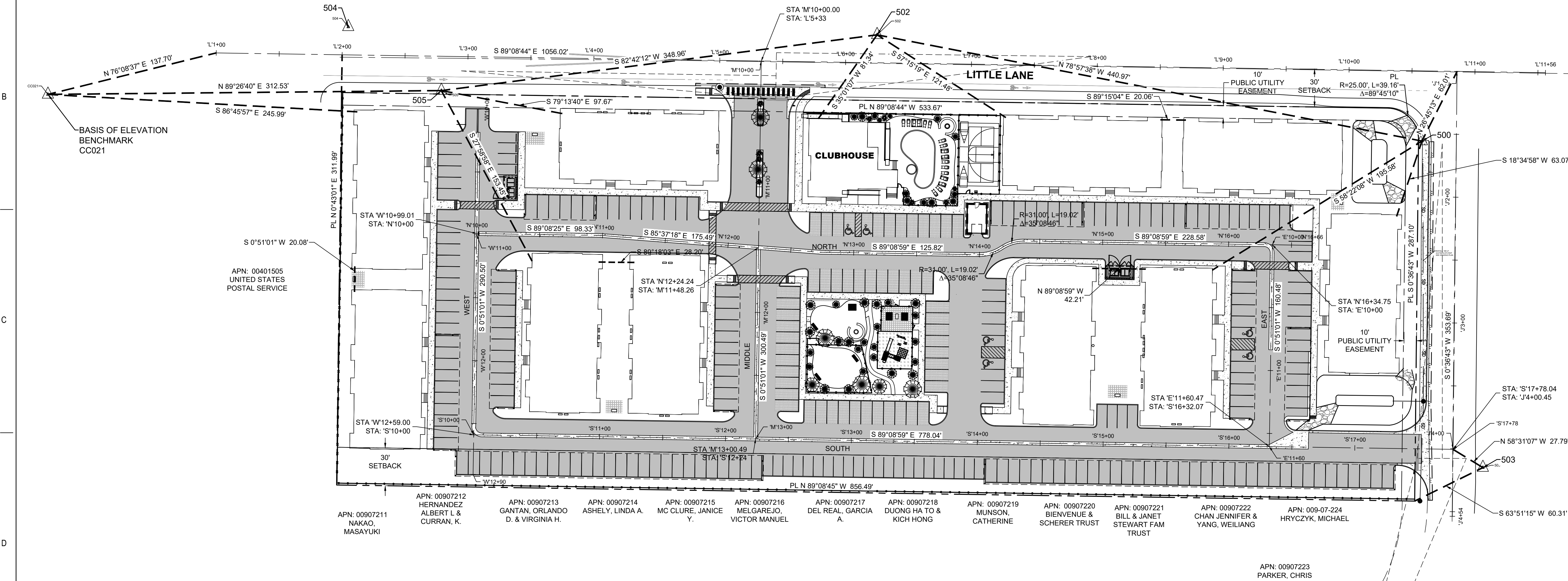
BASIS OF ELEVATIONS

DATUM: NAVD 88
PROJECT BENCHMARK = CC021
HAVING AN ELEVATION OF 4650.70'

ALIGNMENTS LEGEND

NAME	ABBREVIATION
LITTLE LANE	'L'
JANAS WAY	'J'
NORTH	'N'
WEST	'W'
SOUTH	'S'
MIDDLE	'M'
EAST	'E'

SCALE: 1" = 40'
Lumos #9801.000



LITTLE LANE APARTMENTS

CARSON CITY, NEVADA

CLARK RSF ENTERPRISES, LLC

3377 CARMEL MOUNTAIN ROAD

SAN DIEGO, CA 92121

project number 9801.001
date 3/16/21
revisions
3-15-21 revised arch layout

STAMP

SHEET TITLE

OVERALL SITE AND
HORIZONTAL CONTROL PLAN

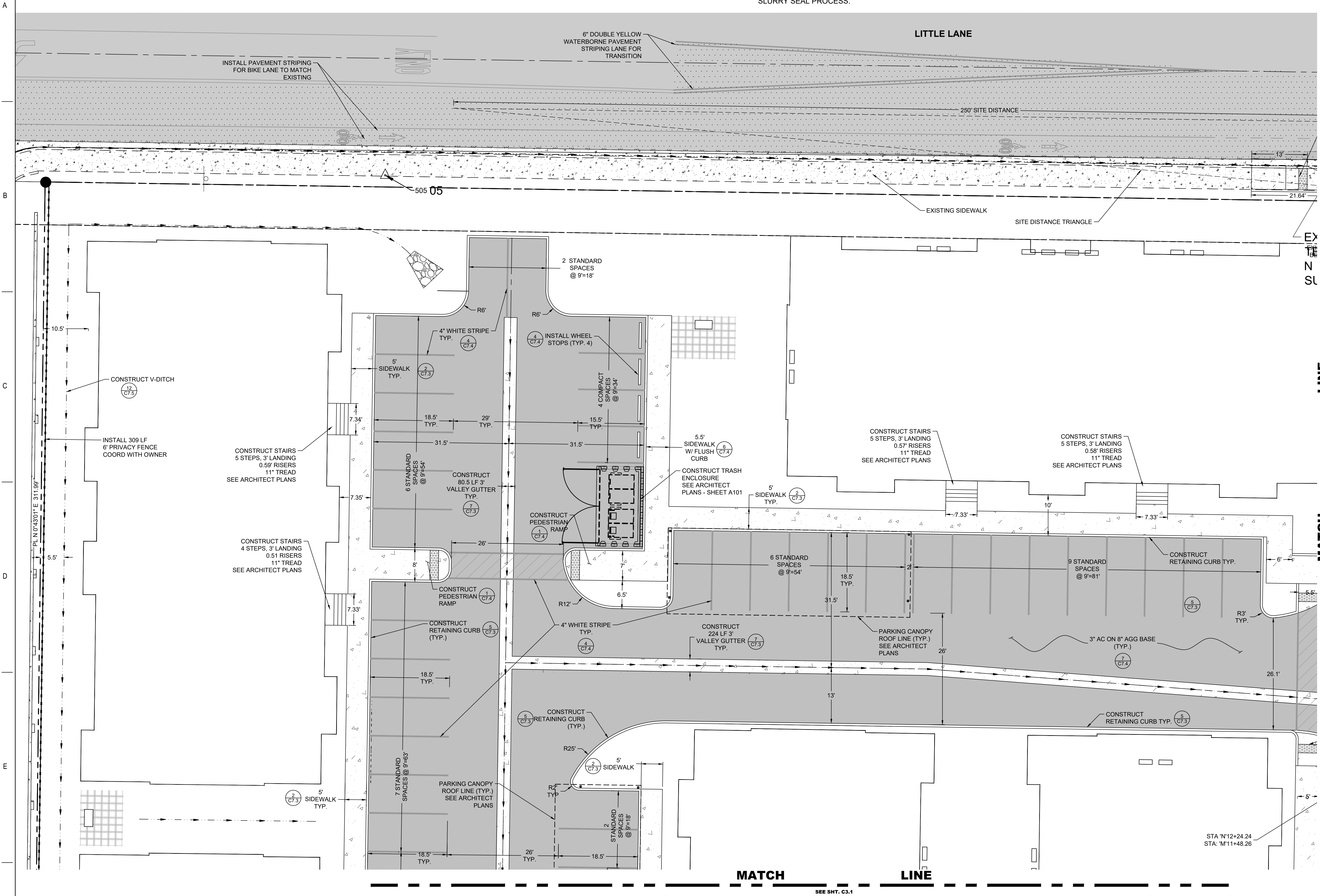
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C2.0

NOTE:
1. CONTRACTOR IS REQUIRED TO SLURRY SEAL AND RE-STRYPE LITTLE LANE PER S.U.P. CONDITION No.16.
"WIDE CRACKS IN LITTLE LANE MUST BE SEALED AND THE PAVEMENT SLURRY SEALED ALONG THE PROJECT FRONTAGE FOR THE SOUTH LANE."
2. CONTRACTOR IS RESPONSIBLE TO FIX ANY ADDITIONAL EXISTING STRIPING THAT MAY BE DAMAGED DURING THE SLURRY SEAL PROCESS.

SLURRY SEAL

SCALE: 1" = 10'
Lumos #9801.000



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SAN DIEGO, CA 92121

project number	9801.001
date	3/16/21
revisions	
2- 7/29/20 review comments	
3-15-21 revised arch layout	

STAMP
SHEET TITLE
SITE PLAN
sheet number

C3.0

- NOTE:
- CONTRACTOR IS REQUIRED TO SLURRY SEAL AND RE-STRIPE LITTLE LANE PER S.U.P. CONDITION No.16.
"WIDE CRACKS IN LITTLE LANE MUST BE SEALED AND THE PAVEMENT SLURRY SEALED ALONG THE PROJECT FRONTAGE FOR THE SOUTH LANE."
 - CONTRACTOR IS RESPONSIBLE TO FIX ANY ADDITIONAL EXISTING STRIPING THAT MAY BE DAMAGED DURING THE SLURRY SEAL PROCESS.

SLURRY SEAL



SCALE: 1" = 10'
Lumos #9801.000



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revisions
1-5/28/20 arch. plan changes
2-7/29/20 review comments
3-15-21 revised arch. layout

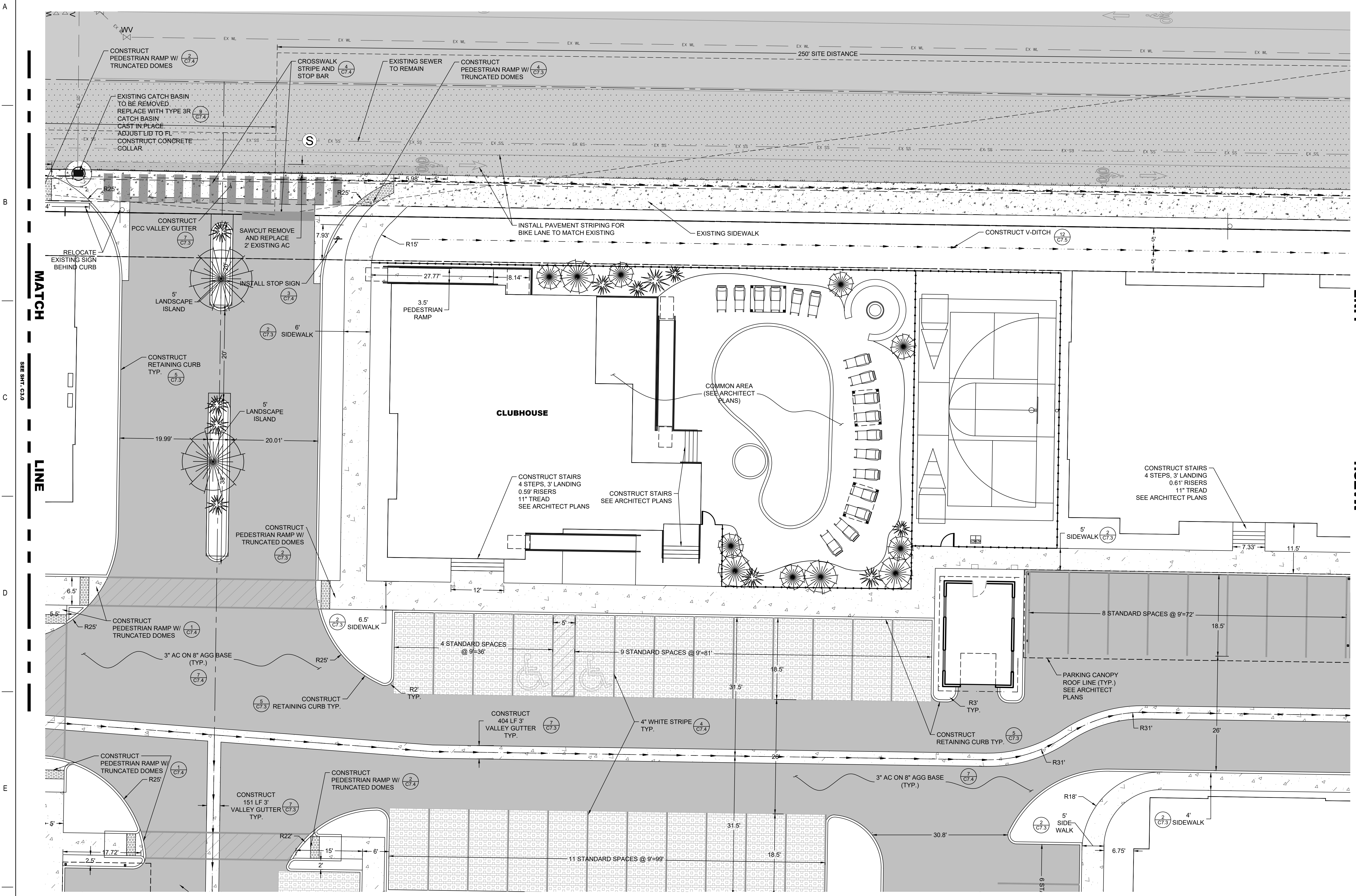
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SHEET TITLE

SITE PLAN

sheet number

C3.2



A
B
C
D
E

LINE
MATCH
LINE
MATCH

MATCH
SEE SHT. C3.0
LINE

MATCH
LINE
SEE SHT. C3.3

SEE SHOT, C3.5

LITTLE LANE APARTMENTS

CARSON CITY, NEVADA

CLARK RSF ENTERPRISES, LLC

project number 9801.001
date 3/16/21

revisions
3-15-21 revised arch layout

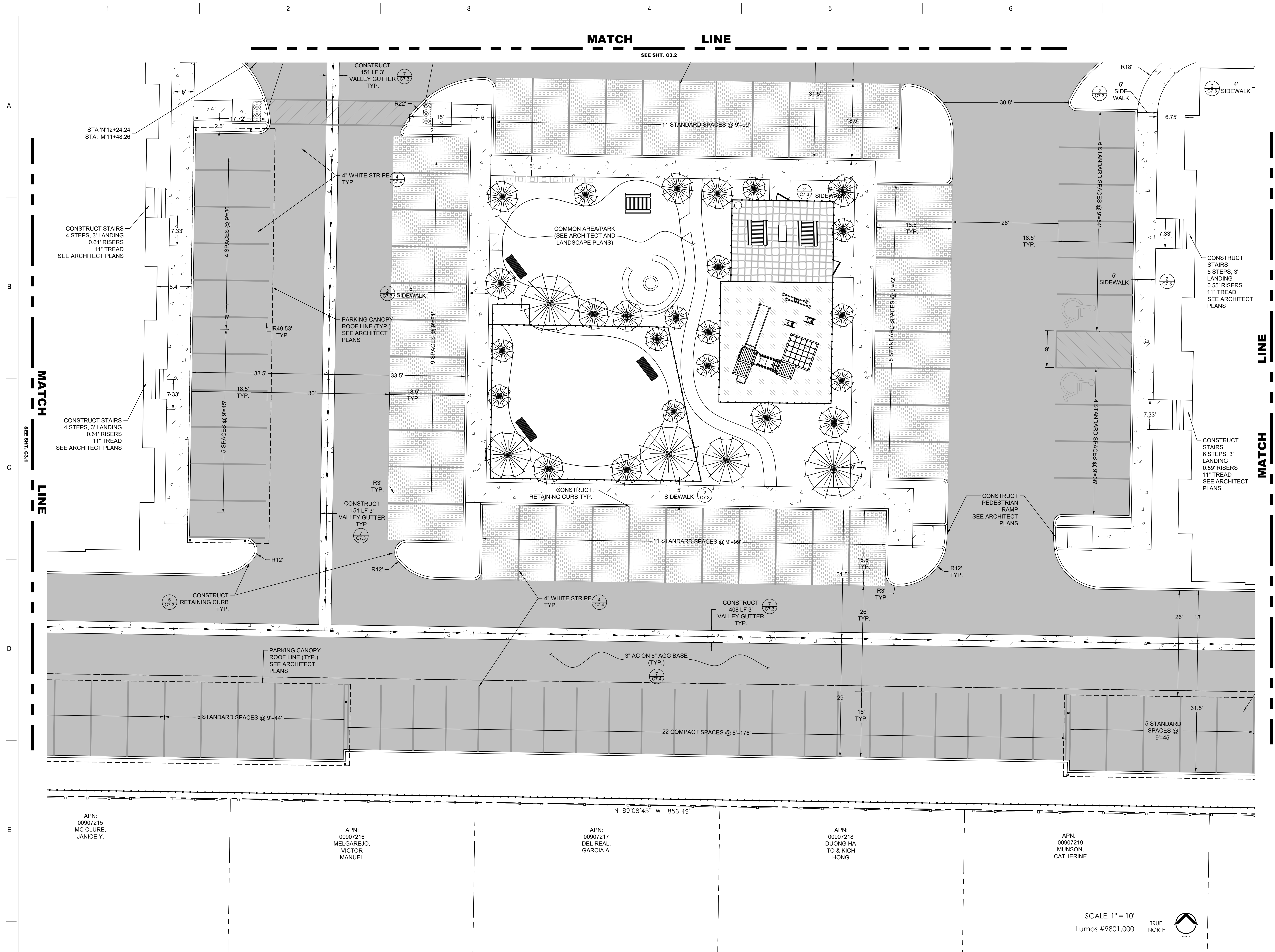
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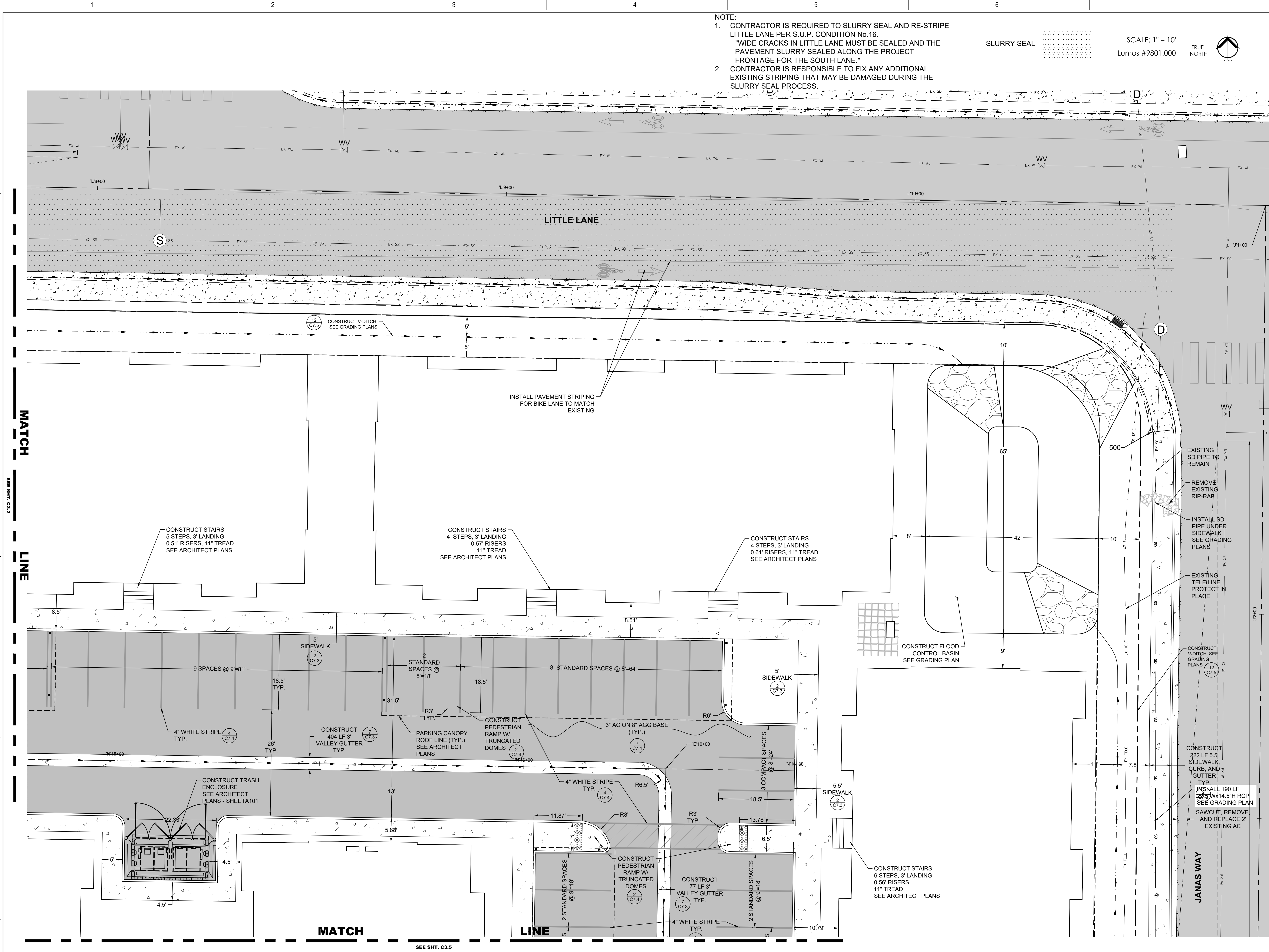
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SITE PLAN

sheet number

C3.3





MATCH
SEE SHT. C3.2

LINE

MATCH

SEE SHT. C3.5

LINE

- NOTE:
- CONTRACTOR IS REQUIRED TO SLURRY SEAL AND RE-STRIPE LITTLE LANE PER S.U.P. CONDITION No.16.
"WIDE CRACKS IN LITTLE LANE MUST BE SEALED AND THE PAVEMENT SLURRY SEALED ALONG THE PROJECT FRONTAGE FOR THE SOUTH LANE."
 - CONTRACTOR IS RESPONSIBLE TO FIX ANY ADDITIONAL EXISTING STRIPING THAT MAY BE DAMAGED DURING THE SLURRY SEAL PROCESS.

SLURRY SEAL



SCALE: 1" = 10'
Lumos #9801.000



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3-15-21 revised arch layout	

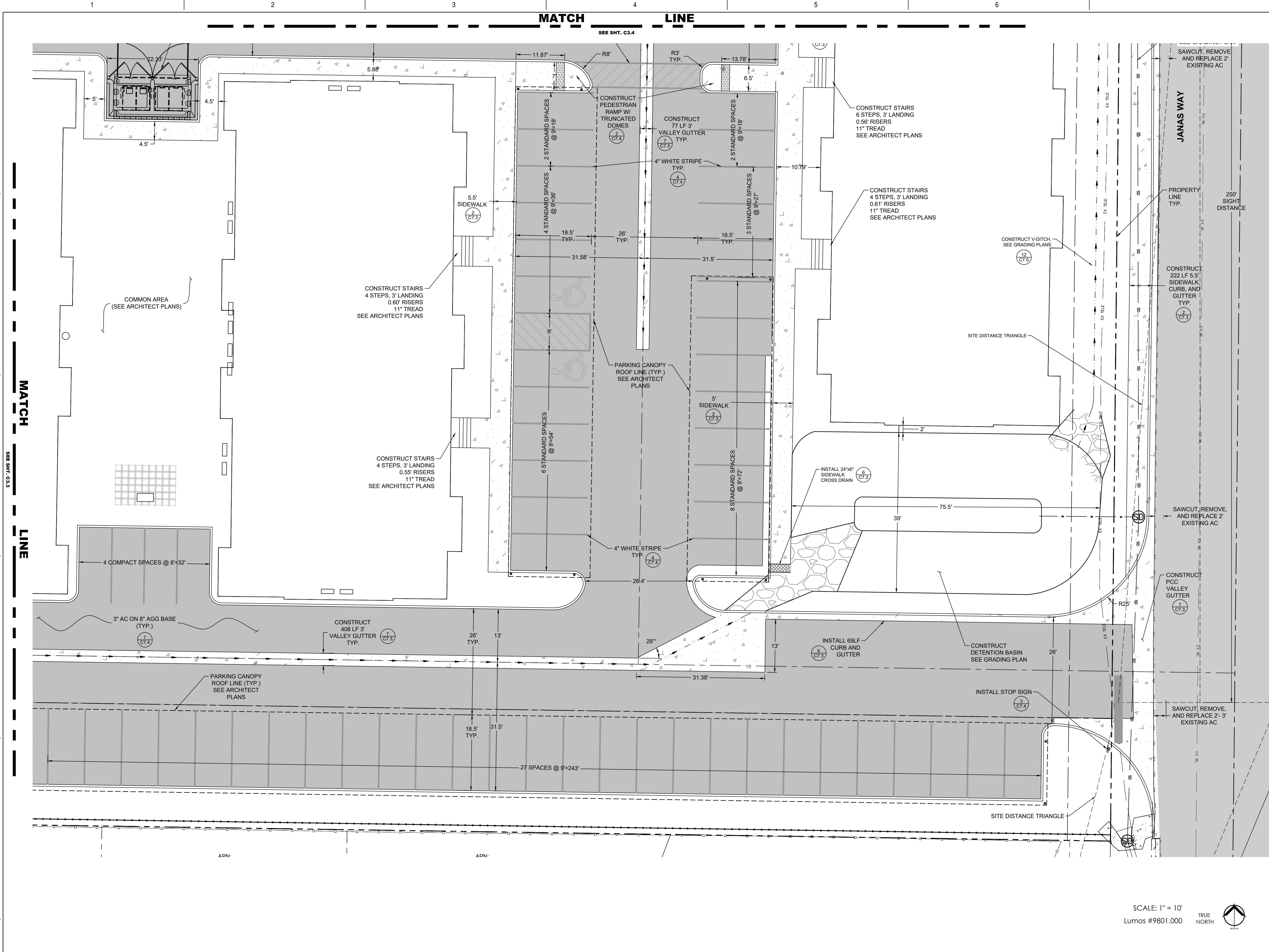
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SHEET TITLE

SITE PLAN

sheet number

C3.4





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LITTLE LANE APARTMENTS
CARSON CITY, NEVADA

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revisions	
2-7/29/20 review comments	
3-15-21 revised arch layout	

STAMP


SHEET TITLE

SITE PLAN

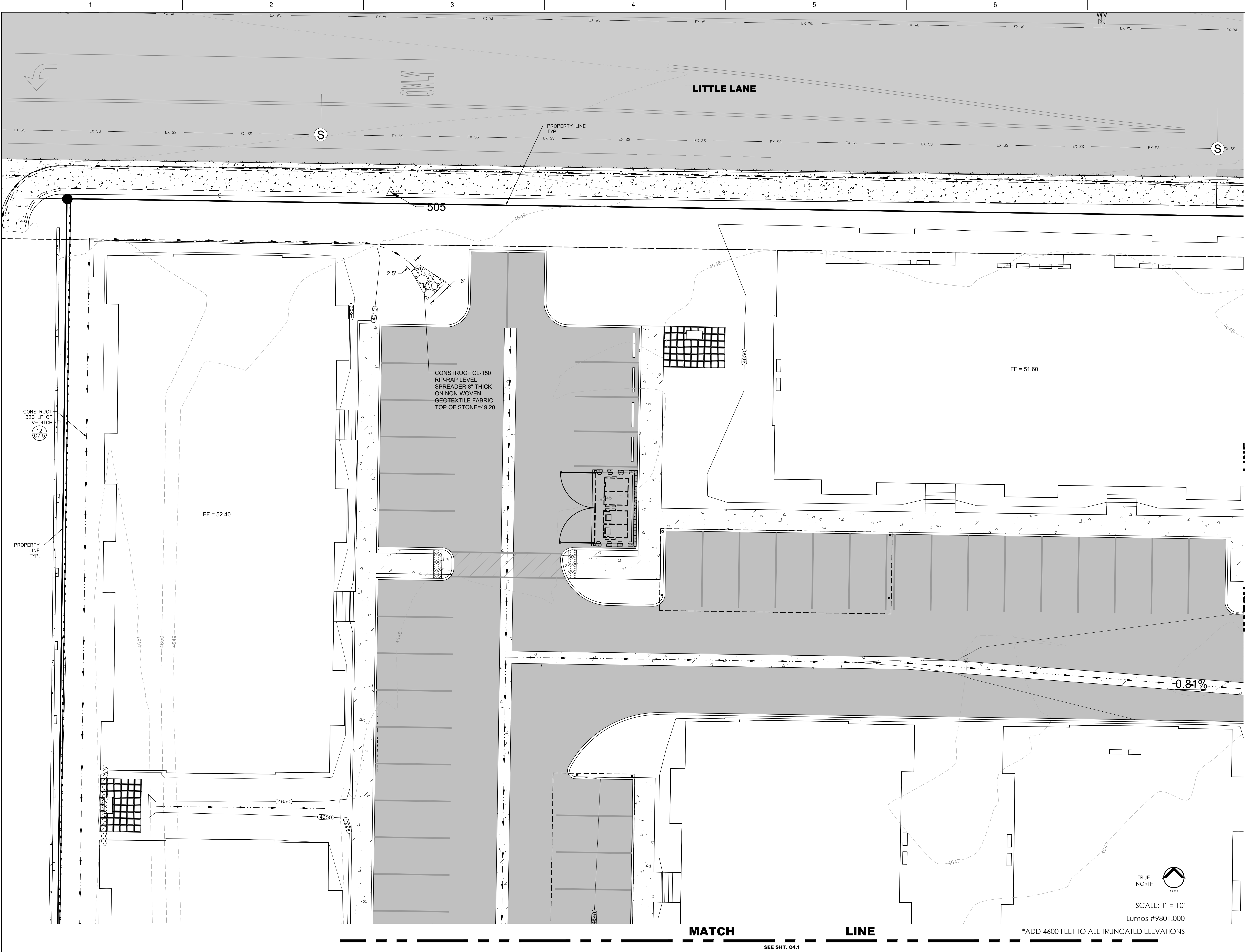
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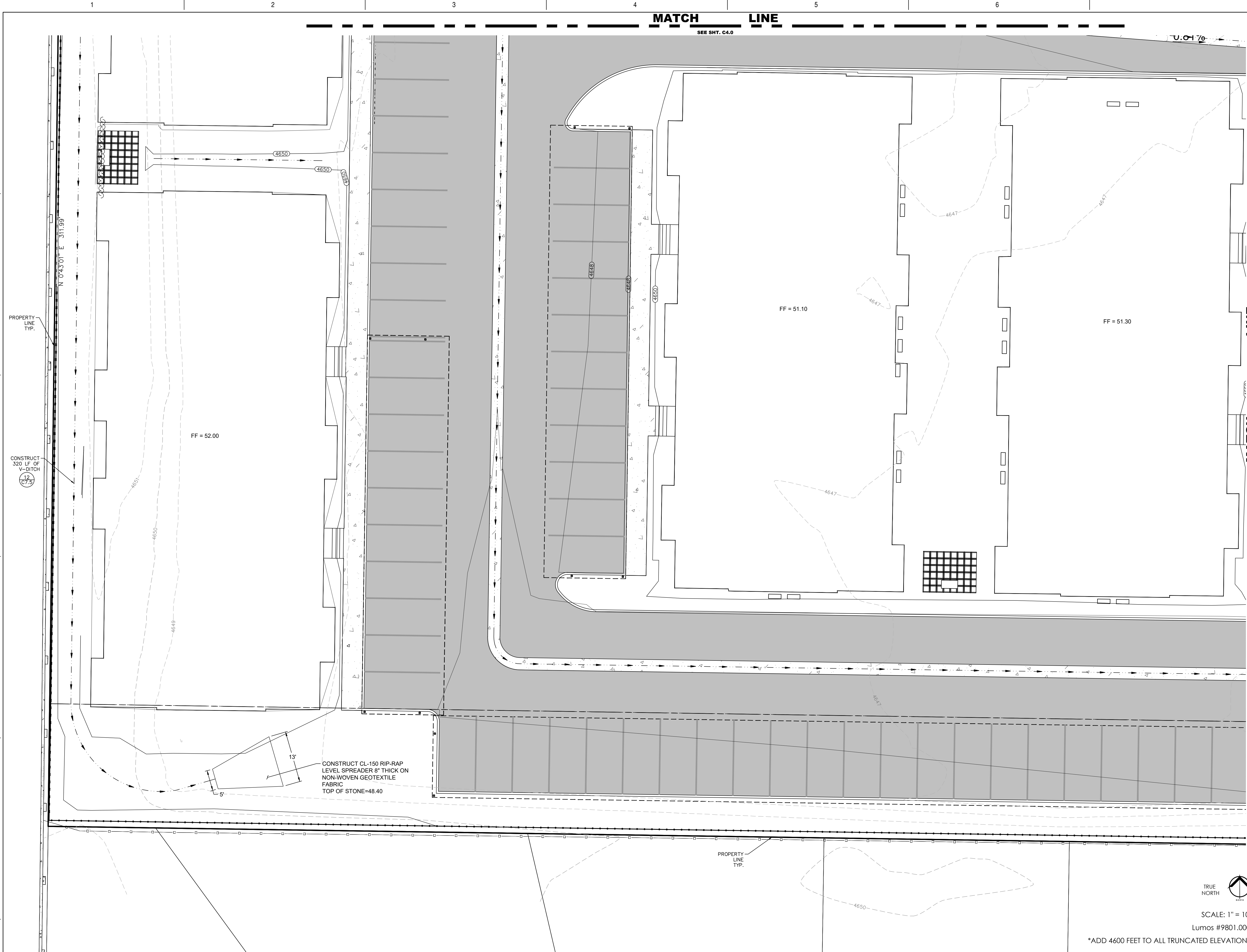
SCALE: 1" = 10'
Lumos #9801.000

TRUE NORTH



C3.5





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& ASSOCIATES
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LITTLE LANE APARTMENTS
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project number 9801.001
date 3/16/21
revisions
3-15-21 revised arch layout

STAMP

SHEET TITLE

GRADING PLAN

sheet number

C4.1



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LITTLE LANE APARTMENTS

CARSON CITY, NEVADA

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Revisions

-5/28/20 arch. plan changes

2-7/29/20 review comments

3-15-21 revised arch layout

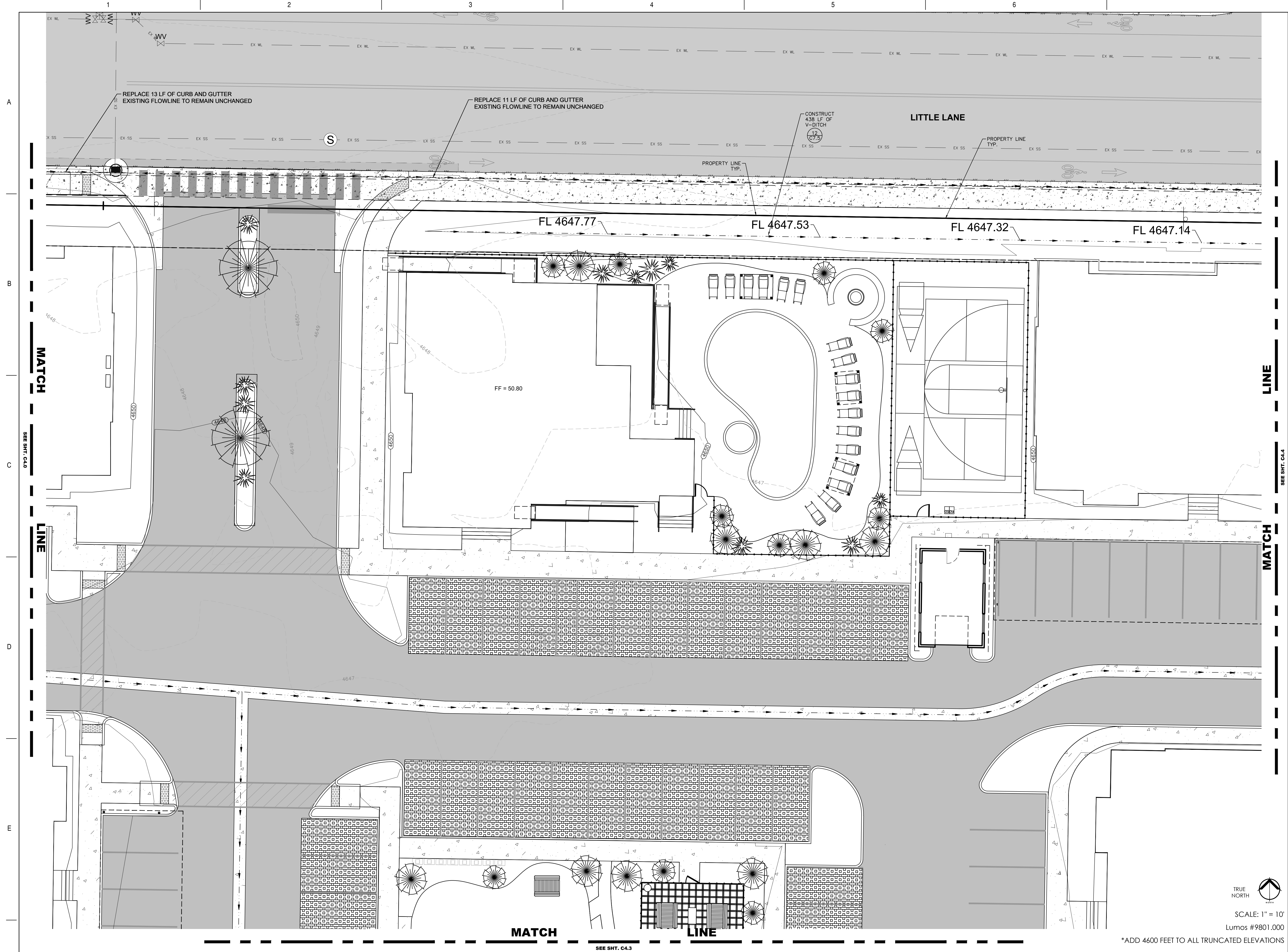
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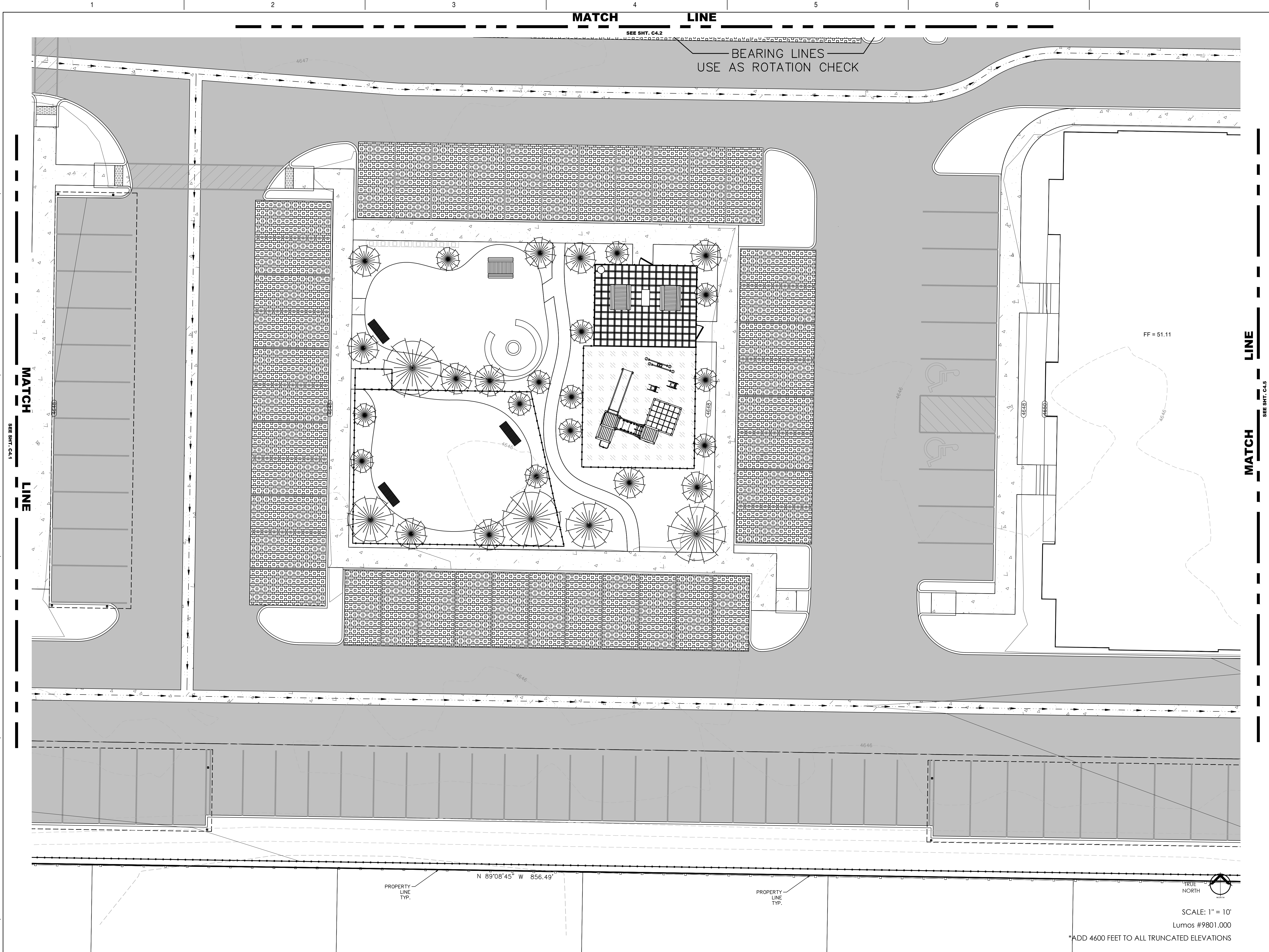
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GRADING PLAN

sheet number

C4.2





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revisions
3-16-21 revised arch layout

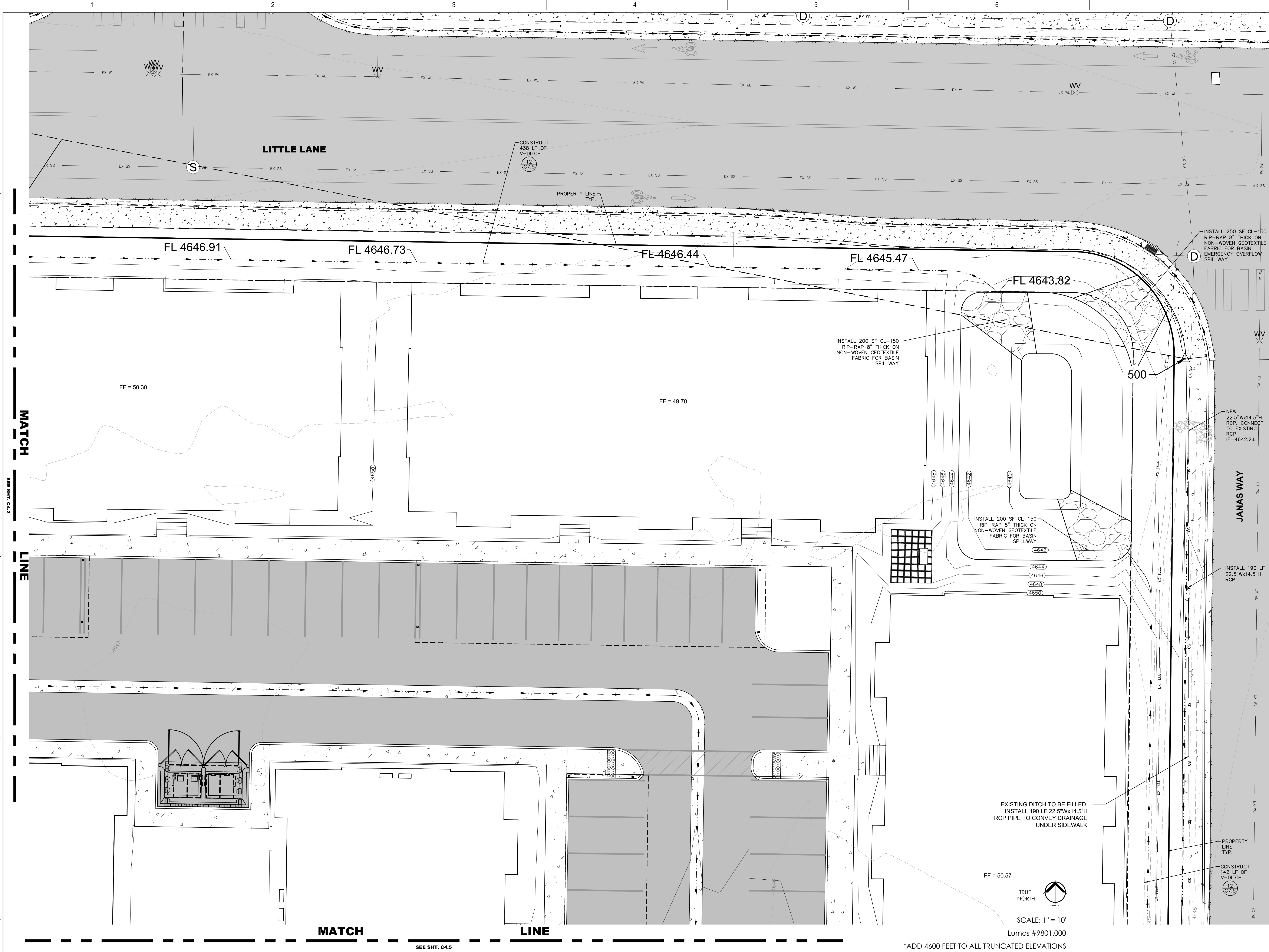
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SHEET TITLE

GRADING PLAN

sheet number

C4.3





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revisions
3-15-21 revised arch layout

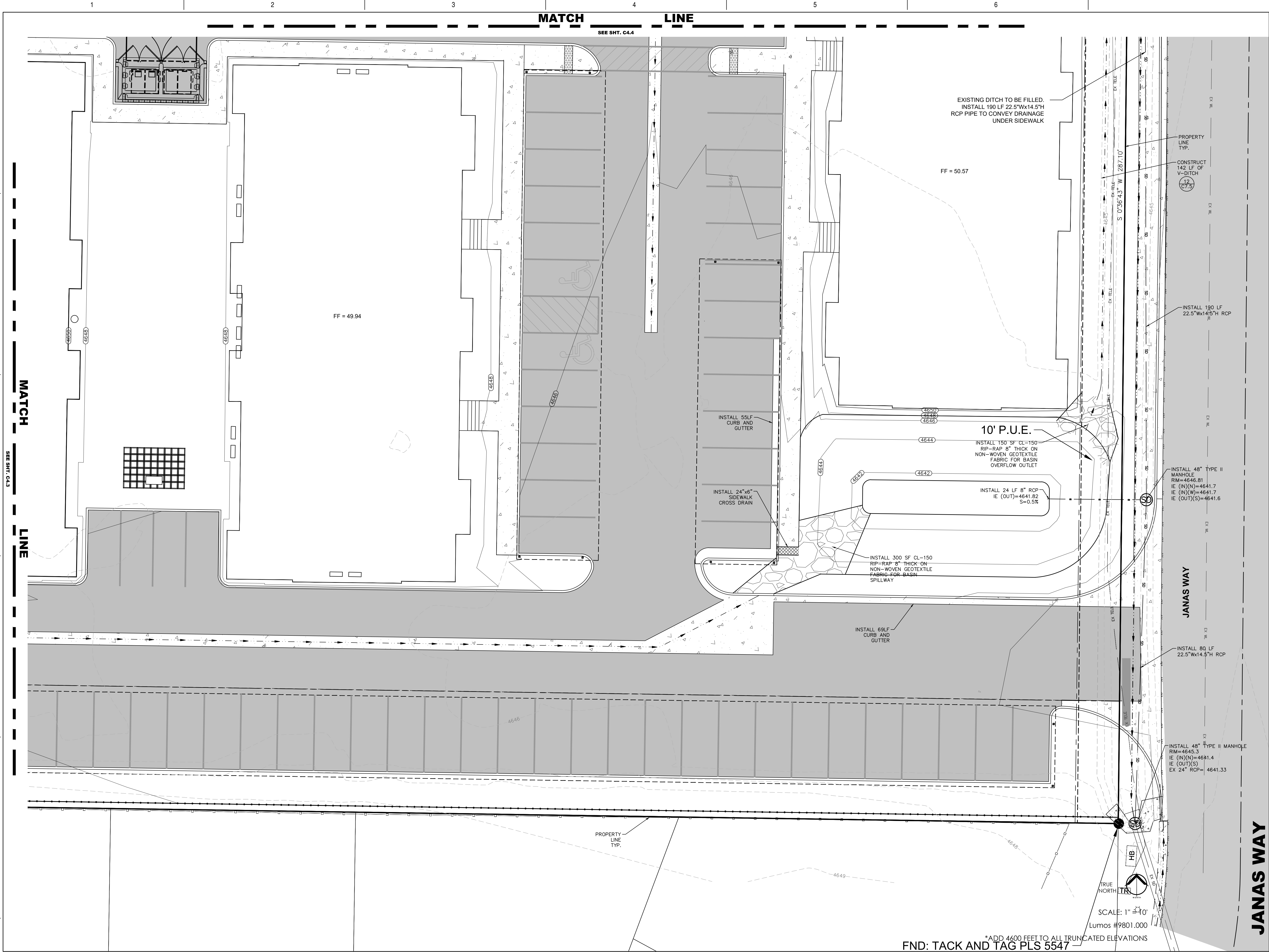
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SHEET TITLE

GRADING PLAN

sheet number

C4.4



KEY NOTES

- 15 TOP OF WATER= 4643.38'
BOTTOM OF SEWER= 4644.81'
- 16 TOP OF WATER= 4643.41'
BOTTOM OF SEWER= 4644.78'
- 18 TOP OF WATER= 4643.81'
BOTTOM OF SEWER= 4643.75'
- 19 TOP OF WATER= 4643.85'
BOTTOM OF SEWER= 4643.60'

NOTES

1. REFER TO PLUMBING PLANS FOR UTILITY CONNECTIONS
AT EACH BUILDING (TYP.)

UTILITY LEGEND

SS SANITARY SEWER
SD STORM DRAIN
WL WATER

SPECIAL CONSTRUCTION
CONSTRUCT SANITARY CROSSING PER
DETAIL 1/C7.2
CENTER 20 LF PIPE LENGTH AND
RESTRAIN WATER JOINTS EITHER SIDE
OF CROSSING.

SCALE: 1" = 10'

Lumos #9801.000



LITTLE LANE



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LITTLE LANE APARTMENTS
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project number 9801.001
date 3/16/21

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2- 7/29/20 review comments
4- 8/19/20 CC NDEP comments
3-15-21 revised arch layout

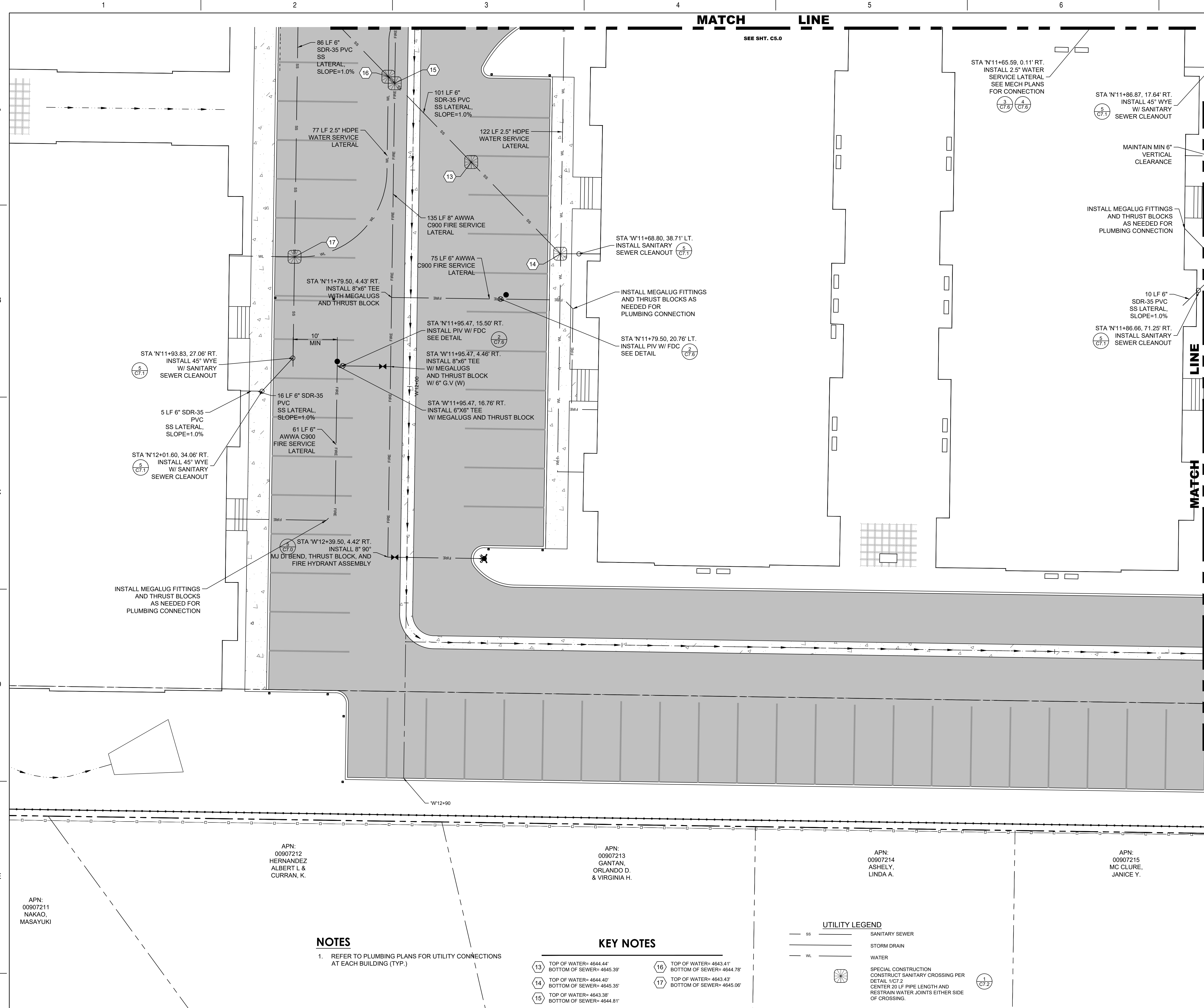
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SHEET TITLE

UTILITY PLAN

sheet number

C5.0



KEY NOTES

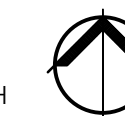
- 7 TOP OF WATER= 4642.49'
BOTTOM OF SEWER= 4643.97'
- 8 TOP OF WATER= 4642.52'
BOTTOM OF SEWER= 4643.95'
- 9 TOP OF WATER= 4642.56'
BOTTOM OF SEWER= 4643.74'
- 10 TOP OF WATER= 4642.55'
BOTTOM OF SEWER= 4643.76'
- 11 TOP OF WATER= 4643.75'
BOTTOM OF SEWER= 4644.23'

NOTES

1. REFER TO PLUMBING PLANS FOR UTILITY CONNECTIONS AT EACH BUILDING (TYP.)

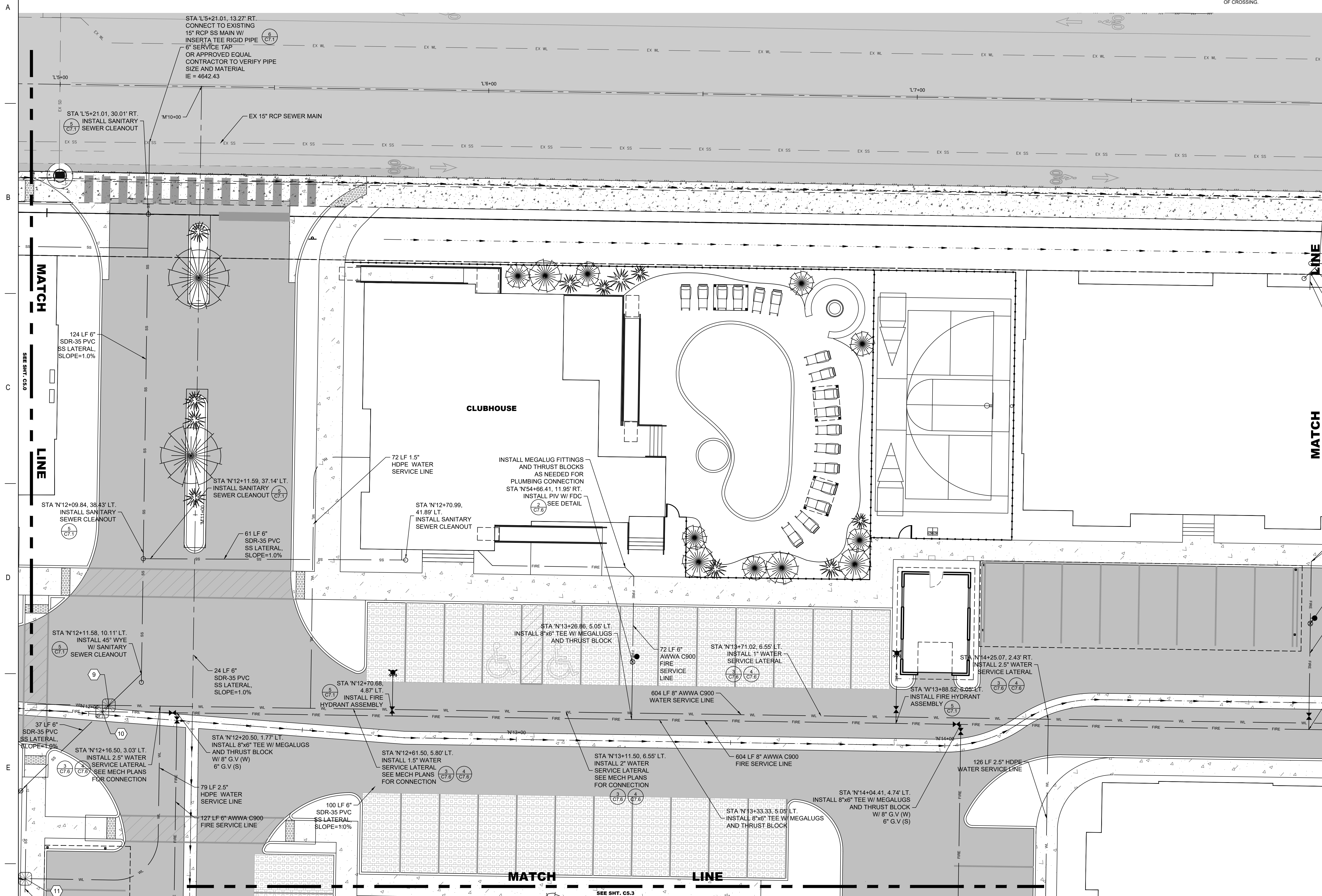
SCALE: 1" = 10'
Lumos #9801.000

TRUE NORTH



UTILITY LEGEND

- SS SANITARY SEWER
SD STORM DRAIN
WL WATER
- SPECIAL CONSTRUCTION
CONSTRUCT SANITARY CROSSING PER
DETAIL 1/C7.2
CENTER 20 LF PIPE LENGTH AND
RESTRAIN WATER JOINTS EITHER SIDE
OF CROSSING.



LUMOS & ASSOCIATES
ENGINEER

308 N. CURRY ST., STE. 200
CARSON CITY, NEVADA 89703
TEL: 775.883.7077

LITTLE LANE APARTMENTS
CARSON CITY, NEVADA

CLARK RSF ENTERPRISES, LLC
3377 CARMEL MOUNTAIN ROAD
SAN DIEGO, CA 92121

project number 9801.001
date 3/16/21

revisions
1-5/28/20 arch. plan changes
2-7/29/20 review comments
4- 8/19/20 CC NDEP comments

3-15-21 revised arch layout

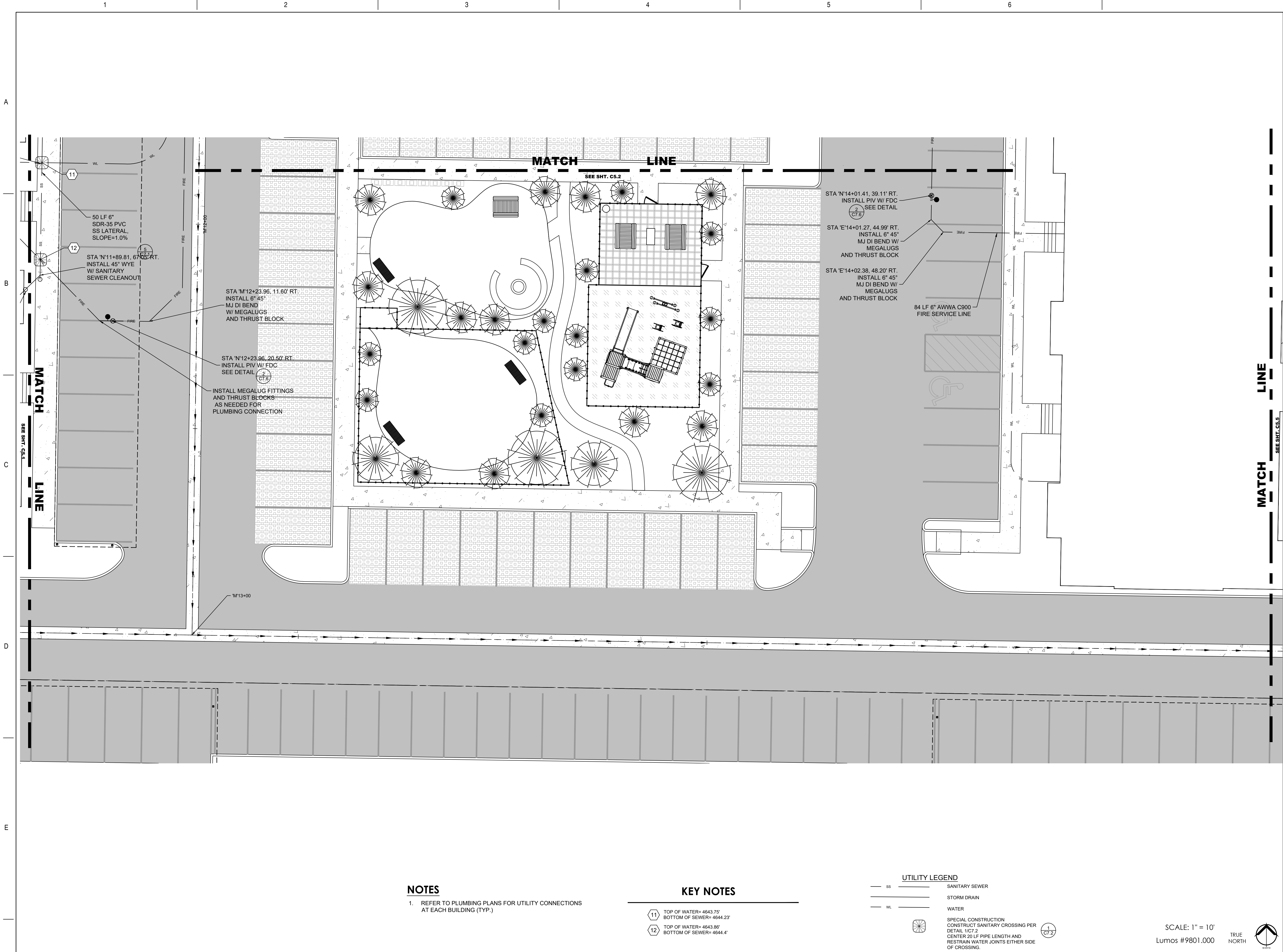
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SHEET TITLE

UTILITY PLAN

sheet number

C5.2



NOTES

1. REFER TO PLUMBING PLANS FOR UTILITY CONNECTIONS AT EACH BUILDING (TYP.)

KEY NOTES

- 11 TOP OF WATER= 4643.75'
BOTTOM OF SEWER= 4644.23'
- 12 TOP OF WATER= 4643.86'
BOTTOM OF SEWER= 4644.4'

UTILITY LEGEND

- SS SANITARY SEWER
- SD STORM DRAIN
- WL WATER



SPECIAL CONSTRUCTION
CONSTRUCT SANITARY CROSSING PER
DETAIL 1/C7.2
CENTER 20 LF PIPE LENGTH AND
RESTRAIN WATER JOINTS EITHER SIDE
OF CROSSING.



SCALE: 1" = 10'
Lumos #9801.000

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STAMP

SHEET TITLE

UTILITY PLAN

sheet number

LITTLE LANE APARTMENTS

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LUMOS
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C5.3

KEY NOTES

- 1

TOP OF WATER= 4642.24'
BOTTOM OF SEWER= 4643.63'
- 2

TOP OF WATER= 4642.19'
BOTTOM OF SEWER= 4643.61'
- 3

TOP OF WATER= 4641.61'
BOTTOM OF SEWER= 4643.29'
- 4

TOP OF WATER= 4641.60'
BOTTOM OF SEWER= 4643.30'
- 5

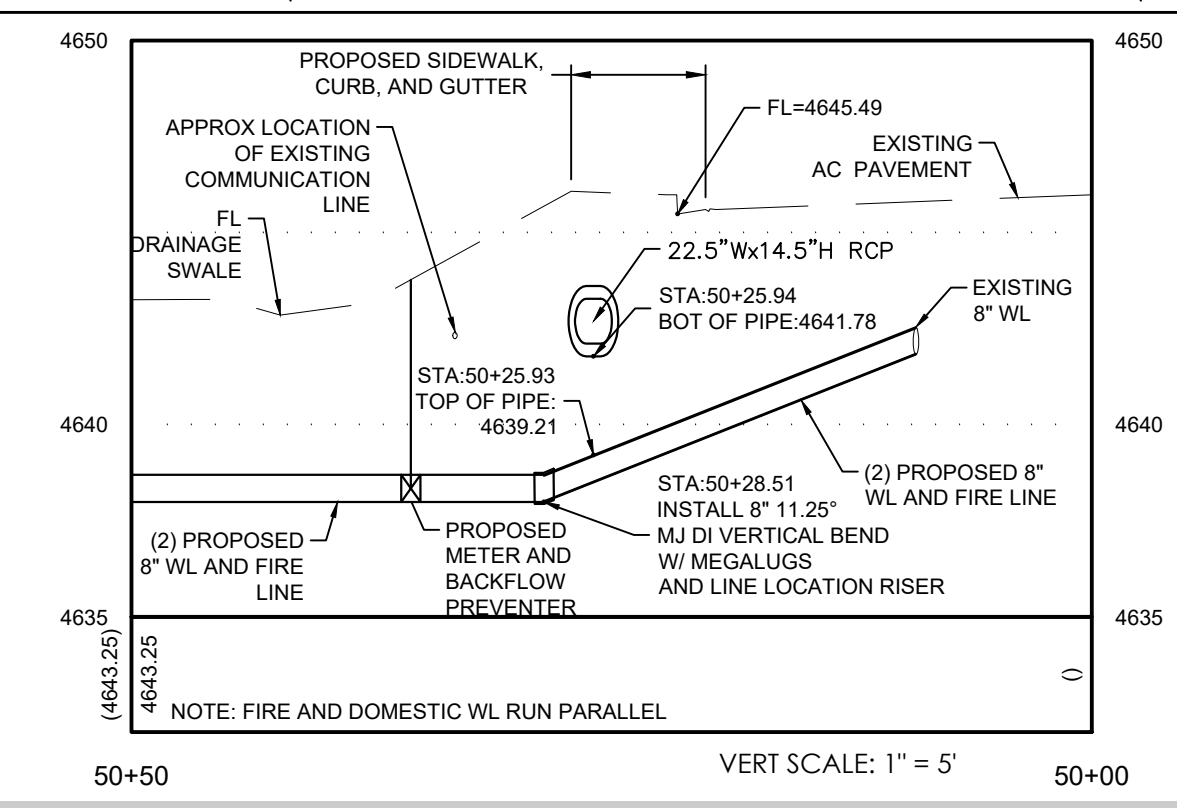
TOP OF WATER= 4641.76'
BOTTOM OF SEWER= 4642.90'
- 6

TOP OF WATER= 4641.78'
BOTTOM OF SEWER= 4642.92'
- 20

TOP OF WATER= 4642.1'
BOTTOM OF SEWER= 4643.57'

NOTES

1. REFER TO PLUMBING PLANS FOR UTILITY CONNECTIONS AT EACH BUILDING (TYP.)



UTILITY LEGEND

SS SANITARY SEWER

SD STORM DRAIN

WL WATER

SPECIAL CONSTRUCTION
CONSTRUCT SANITARY CROSSING PER
DETAIL 1/C7.2
CENTER 20 LF PIPE LENGTH AND
RESTRAIN WATER JOINTS EITHER SIDE
OF CROSSING.

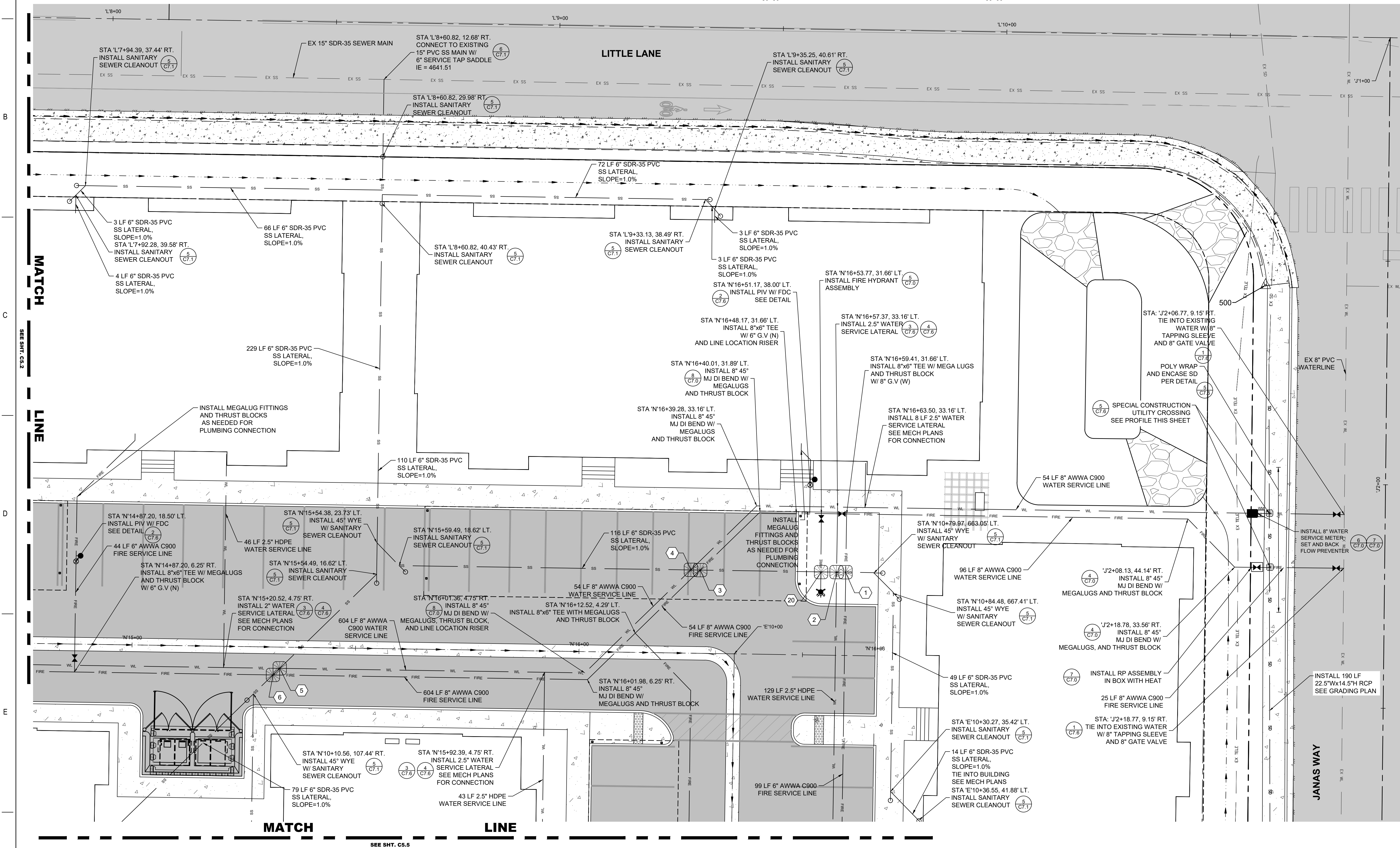
TRUE NORTH

HORIZONTAL SCALE: 1" = 10'

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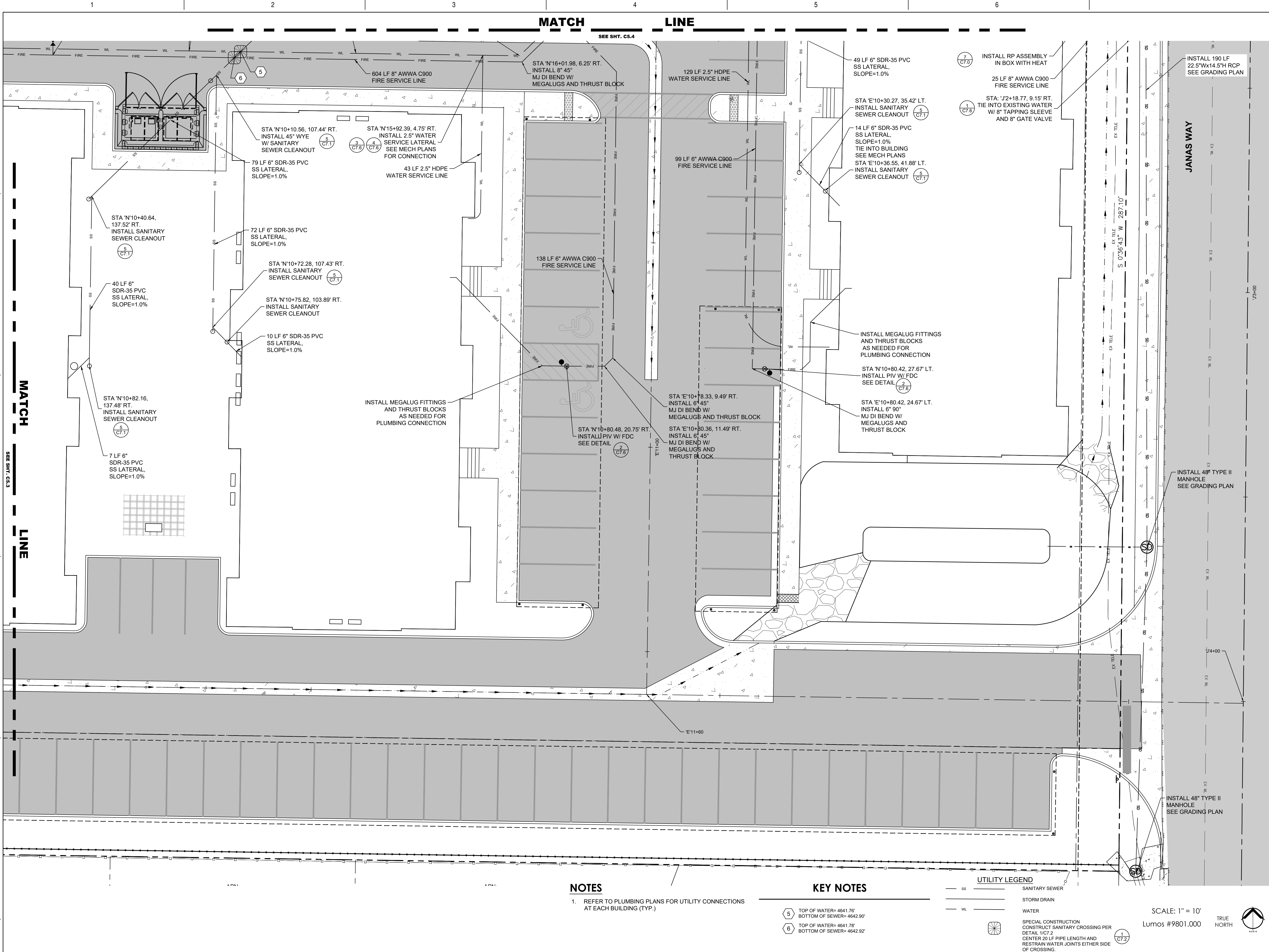
revisions
2-7/29/20 review comments
3-7/31/20 NDPE review comments
4- 8/19/20 CC NDEP comments
3-15-21 revised arch layout

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SHEET TITLE
UTILITY PLAN

sheet number

C5.4



NOTES
1. REFER TO PLUMBING PLANS FOR UTILITY CONNECTIONS AT EACH BUILDING (TYP.)

KEY NOTES
5 TOP OF WATER= 4641.76'
BOTTOM OF SEWER= 4642.90'
6 TOP OF WATER= 4641.78'
BOTTOM OF SEWER= 4642.92'

UTILITY LEGEND
SS SANITARY SEWER
SD STORM DRAIN
WL WATER
SPECIAL CONSTRUCTION
CONSTRUCT SANITARY CROSSING PER
DETAIL 11C7.2
CENTER 20 LF PIPE LENGTH AND
RESTRAIN WATER JOINTS EITHER SIDE
OF CROSSING.

SCALE: 1" = 10'
Lumos #9801.000
TRUE NORTH

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UTILITY PLAN
sheet number

C5.5

CONTRACTOR NOTES:

- 1) OWNER OR CONTRACTOR'S THIRD PARTY INSPECTION FIRM SHALL VERIFY THAT THE SWPPP IS BEING IMPLEMENTED AND MAINTAINED THROUGHOUT THE PROJECT
- 2) CONSTRUCTION MATERIAL STORAGE AREA CAN BE MOVED DURING CONSTRUCTION BUT WILL NEED TO HAVE PROPER BMP'S INSTALLED
- 3) CONTRACTOR IS RESPONSIBLE FOR ENSURING SEDIMENT OR DEBRIS FROM CONSTRUCTION DO NOT ENTER EXISTING STORM DRAIN FACILITIES DURING ALL PHASES OF CONSTRUCTION ACTIVITIES.
- 4) CONTRACTOR IS RESPONSIBLE FOR MAINTAINING BMP'S ACCORDINGLY WITH EACH PHASE OF CONSTRUCTION ACTIVITIES.
- 5) ADDITIONAL BMP'S MAY BE REQUIRED IN ADDITION TO THOSE MENTIONED IN THE SWPPP IF THEY DO NOT MEET CARSON CITY PERFORMANCE STANDARDS DURING CONSTRUCTION.
- 6) AT A MINIMUM, THE CONTRACTOR OR HIS AGENT SHALL INSPECT ALL DISTURBED AREAS, AREAS USED FOR STORAGE OF MATERIALS AND EQUIPMENT THAT ARE EXPOSED TO PRECIPITATION, VEHICLE ENTRANCE AND EXIT LOCATIONS AND ALL BMP'S WEEKLY, PRIOR TO A FORECASTED RAIN EVENT AND WITHIN 24 HOURS AFTER ANY ACTUAL RAIN EVENT. THE CONTRACTOR OR HIS AGENT SHALL UPDATE THE SWPPP AS NECESSARY. SOME EXCEPTIONS TO WEEKLY INSPECTIONS MAY APPLY, SUCH AS FROZEN GROUND CONDITIONS OR SUSPENSION OF LAND DISTURBED ACTIVITIES. REFER TO NVR 100000.

STORMWATER POLLUTION PREVENTION NOTES:

- 1) THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ANY SEDIMENT, DEBRIS, OR POTENTIAL POLLUTANTS THAT MAY BE DISCHARGED INTO PUBLIC RIGHTS OF WAYS IN CARSON CITY DUE TO CONSTRUCTION ACTIVITIES.
- 2) ADDITIONAL BMP'S MAY BE REQUIRED OF THE CONTRACTOR IF UNFORESEEN EROSION PROBLEMS DO NOT MEET THE PERFORMANCE STANDARDS IN CARSON CITY MUNICIPAL CODE OR THE TRUCKEE MEADOWS BMP MANUAL.
- 3) ACCUMULATED SEDIMENT IN BMP'S SHALL BE REMOVED WITHIN SEVEN DAYS AFTER A STORMWATER RUNOFF EVENT OR PRIOR TO THE NEXT ANTICIPATED STORM EVENT WHICHEVER IS EARLIER. SEDIMENT MUST BE REMOVED WHEN BMP DESIGN CAPACITY HAS BEEN REDUCED BY 50 PERCENT OR MORE.

EROSION CONTROL NOTES:

- 1) ALL PUBLIC RIGHT OF WAYS LOCATED ADJACENT TO THE SITE MUST BE CLEANED DAILY OF ALL SEDIMENT OR WASTES THAT ORIGINATE FROM THE SITE.
- 2) TEMPORARY OR PERMANENT STABILIZATION OF SOILS MUST BE APPLIED NO LATER THAN 14 DAYS TO ALL DISTURBED SOILS.
- 3) ALL BMP'S MUST BE INSPECTED AND MAINTAINED WEEKLY, PRIOR TO RAIN EVENTS, AND WITHIN 24 HOURS AFTER A STORM EVENT CREATES RUNOFF.
- 4) ALL BMP'S MUST BE IN ACCORDANCE WITH CARSON CITY STANDARDS, AND NECESSARY BMP'S MUST BE IN PLACE PRIOR TO THE START OF EACH CONSTRUCTION ACTIVITY.

19.2.11.2 TEMPORARY EROSION CONTROL STANDARDS. TEMPORARY EROSION CONTROL TREATMENTS SHALL BE SHOWN ON THE IMPROVEMENTS PLANS. TEMPORARY EROSION CONTROL TREATMENTS SHALL BE INSTALLED WITHIN FIFTEEN (15) DAYS FROM THE START OF LAND DISTURBANCES ACTIVITIES, AND SHALL PROVIDE FOR THE FOLLOWING:

1. TEMPORARY SOIL STABILIZATION MEASURES, SUCH AS EROSION CONTROL BLANKETS, SHALL BE INSTALLED AND MAINTAINED ON GRADED SLOPES GRADED AT 10:1 OR STEEPER UNTIL PERMANENT EROSION CONTROL TREATMENTS ARE IN PLACE.
2. TEMPORARY DESILTING FACILITIES SHALL BE PROVIDED AT ALL DRAINAGE STRUCTURE INLETS AND PRIOR TO DISCHARGE WHICH LEAVES THE AREA WHICH IS DISTURBED BY THE PROJECT, OR ENTERS A DRAINAGE, STREAM, CREEK, LAKE OR WATERWAY. DESILTING FACILITIES SHALL BE DESIGNED FOR A TWENTY-FIVE (25) YEAR PEAK STORM INTENSITY. THEY SHALL BE SHOWN AND DETAILED ON THE PLANS, AND SHALL INDICATE THE DESILTING FACILITY VOLUME BASED ON GRADIENT, INFLOW, AND NATURE OF SOILS. THE PLANS SHALL INDICATE THE SIZE OF DESILTING BASIN OUTLET PIPE AND OUTLET VELOCITY. OUTLET CONDITIONS FROM THE DESILTING FACILITIES SHALL NOT EXCEED DOWNSTREAM LIMITATIONS. ALL DESILTING FACILITIES SHALL HAVE AN OVERFLOW WHICH IS DESIGNED TO SAFELY PASS ONE AND ONE-HALF (1½) TIMES THE TWENTY-FIVE (25) YEAR PEAK DISCHARGE.
3. PLACEMENT OF DEVICES TO REDUCE EROSION DAMAGE (I.E., TEMPORARY BERM, CHECK DAMS, HAY OR STRAW EROSION CHECKS, INLET SEDIMENT TRAPS, ETC.) WITHIN THE AREA DISTURBED BY THE PROJECT SHALL BE SHOWN ON THE PLANS. APPROVED STOCKPILE LOCATIONS FOR MATERIALS SHALL ALSO BE INDICATED ON THE PLANS.
4. A CONSTRUCTION ENTRANCE SHALL BE INSTALLED PRIOR TO COMMENCEMENT OF GRADING. LOCATION OF THE ENTRANCE MAY BE ADJUSTED BY THE CONTRACTOR TO FACILITATE GRADING OPERATIONS. ALL CONSTRUCTION TRAFFIC WHICH ENTERS AN EXISTING PAVED ROAD SHALL CROSS THE CONSTRUCTION ENTRANCE. THE CONSTRUCTION ENTRANCE SHALL CONSIST OF A BED OF NOMINAL TWO-INCH (2") TO FOUR-INCH (4") GRAVEL NO SMALLER THAN FIFTEEN FEET (15') WIDE, TWENTY FEET (20') LONG AND TWELVE INCHES (12") DEEP. THE CONSTRUCTION ENTRANCE SHALL BE REMOVED PRIOR TO PLACING BASE FOR PAVING.

5. THE FOLLOWING NOTES SHALL BE PLACED ON THE IMPROVEMENT PLANS:

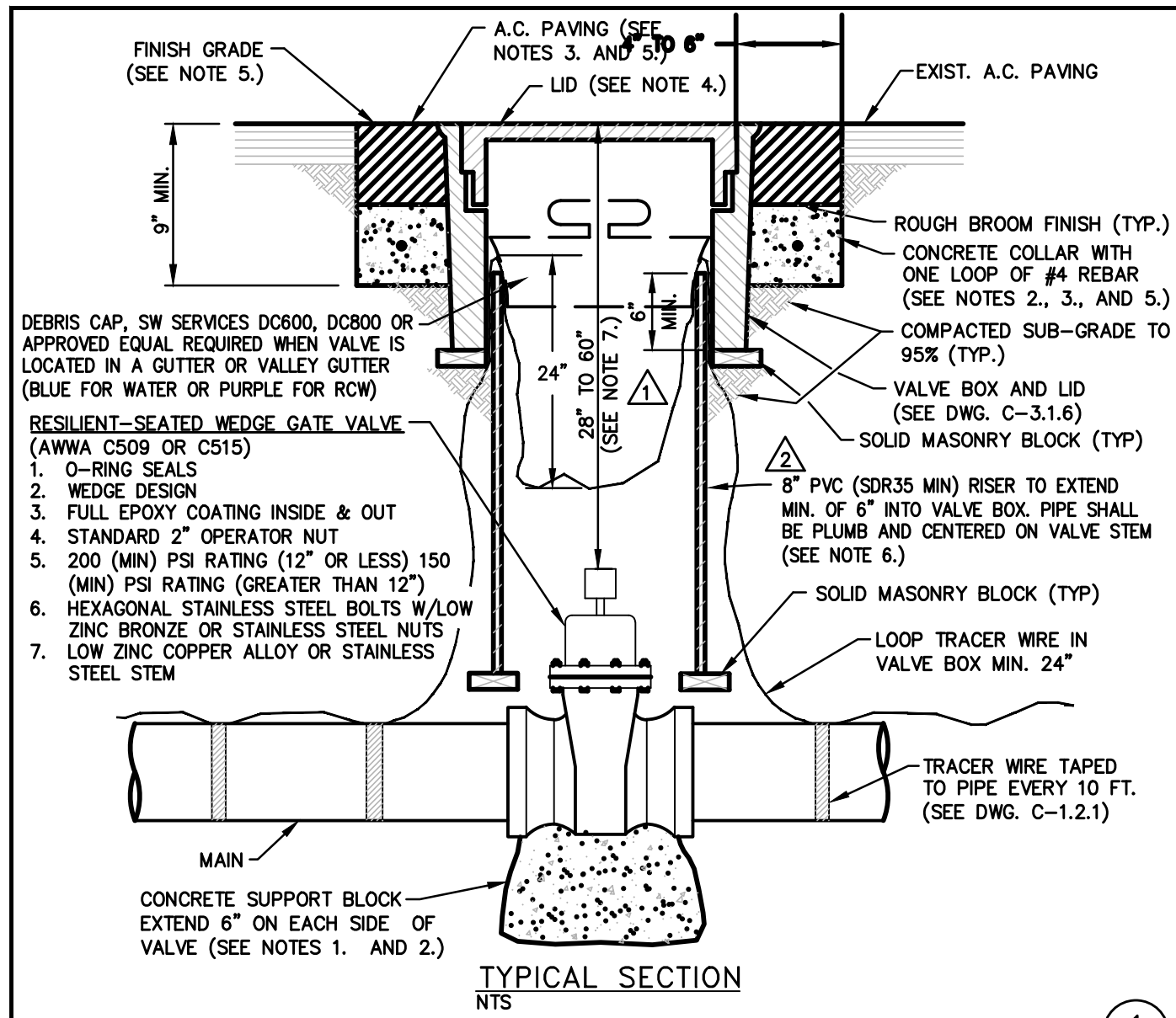
- A. IN CASE OF EMERGENCY CALL RON LACY - 509-879-8951
- B. STANDBY CREW FOR EMERGENCY WORK SHALL BE AVAILABLE AT ALL TIMES. NECESSARY MATERIALS SHALL BE AVAILABLE ON-SITE AND STOCKPILED AT APPROVED LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES OR TO REPAIR DAMAGED EROSION CONTROL MEASURES.
- C. AFTER A RAINSTORM, ALL SILT AND DEBRIS SHALL BE REMOVED FROM CHECK BERMS AND DESILTING FACILITIES. GRADED SLOPE SURFACE PROTECTION MEASURES DAMAGED DURING THE RAINSTORM SHALL ALSO BE REPAIRED.
- D. FILL SLOPES AT THE PROJECT PERIMETER MUST DRAIN AWAY FROM THE TOP OF THE SLOPE AT THE CONCLUSION OF EACH WORKING DAY.
- E. A SIX FOOT (6') HIGH PERIMETER FENCE OR A TWENTY-FOUR (24) HOUR GUARD SHALL BE POSTED ON THE SITE WHENEVER THE DEPTH OF WATER IN A FACILITY EXCEEDS EIGHTEEN INCHES (18").

A

<p>1. ALL WORK SHALL CONFORM TO THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" (SSPWC) AND THE "STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION" (SDPWC) AS ADOPTED BY CARSON CITY. THE CONTRACTOR SHALL OBTAIN A PERMIT FOR PUBLIC WORKS CONSTRUCTION FROM THE CARSON CITY PERMIT CENTER PRIOR TO THE START OF CONSTRUCTION.</p> <p>2. ALL TRAFFIC CONTROL AND BARRICAADING WITHIN THE CARSON CITY RIGHT-OF-WAY SHALL CONFORM TO SECTION 100.33, 332.04 AND 332.05 OF THE STANDARD SPECIFICATIONS, PART 6 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION, AND THE I-17 CENTER, TEMPORARY TRAFFIC CONTROL GUIDELINES LATEST EDITION. A TRAFFIC CONTROL PLAN MUST BE SUBMITTED AND APPROVED BY THE CARSON CITY ENGINEERING DIVISION PRIOR TO ANY STREET CLOSURES.</p> <p>3. THE CONTRACTOR SHALL CALL UNDERGROUND SERVICE ALERT "CALL BEFORE YOU DIG" (811) OR 1-800-227-2600 AT LEAST TWO (2) WORKING DAYS PRIOR TO START OF CONSTRUCTION AND COMPLY WITH THE REQUIREMENTS OF NRS AND NAC 455 THROUGHOUT THE COURSE OF THE WORK. SEWER SERVICE LATERALS ARE NOT OWNED OR MARKED BY CARSON CITY.</p> <p>4. THE CONTRACTOR SHALL CALL THE CARSON CITY ENGINEERING DIVISION (887-2300) TWO (2) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL CALL ONE (1) WORKING DAY PRIOR TO REQUIRED INSPECTIONS AND TESTING. THE REQUIRED INSPECTIONS AND TESTING ARE LISTED ON THE INSPECTION RECORD ISSUED WITH EACH PERMIT. THE CONTRACTOR MUST HAVE THE PERMIT NUMBER AND THE DESCRIPTION LISTED ON THE INSPECTION RECORD TO SCHEDULE REQUIRED INSPECTIONS AND TESTING. FOR CITY CONTRACTED PROJECTS, THE CONTRACTOR SHALL SCHEDULE INSPECTIONS PER THE CONTRACT DOCUMENTS.</p> <p>5. FINAL INSPECTIONS WILL BE PERFORMED BY CARSON CITY ENGINEERING DIVISION ACCORDING TO THE CARSON CITY INSPECTIONS AND TESTING PROCEDURES. NOTE: THESE PROCEDURES REQUIRE SUBMITTAL OF RECORD DRAWING PRINTS BY THE CONTRACTOR AND 10 WORKING DAYS TO PREPARE A FINAL PUNCH LIST. ALL CONDITIONS OF THE FINAL INSPECTION MUST BE COMPLETED PRIOR TO FINAL ACCEPTANCE OR ANY APPROVAL OF A CERTIFICATE OF OCCUPANCY BY THE CARSON CITY ENGINEERING DIVISION.</p> <p>6. MODIFICATIONS TO THE APPROVED PLANS REQUIRES REVIEW AND APPROVAL BY THE CARSON CITY ENGINEERING DIVISION. WORK PERFORMED WITHOUT WRITTEN APPROVAL BY CARSON CITY ENGINEERING WILL REQUIRE REMOVAL AT THE CONTRACTORS EXPENSE.</p> <p>7. THE APPROVED PLAN, PERMIT AND INSPECTION RECORD MUST BE ON THE JOB SITE AT ALL TIMES.</p> <p>8. PLAN APPROVAL FOR SEWER AND WATER CONSTRUCTION SHALL EXPIRE ONE YEAR FROM DATE OF APPROVAL UNLESS CONSTRUCTION HAS BEEN INITIATED. (CCMC 12.06.180F, 12.01.140D)</p> <p>9. THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR ACQUIRING A STORMWATER DISCHARGE PERMIT FROM THE NEVADA DIVISION OF ENVIRONMENTAL PROTECTION (NDEP) INCLUDING DEVELOPING, SUBMITTING AND IMPLEMENTING A STORM WATER POLLUTION PREVENTION PLAN (SWPPP). THE CONTRACTOR SHALL DEVELOP, PLACE AND MAINTAIN STORM WATER PROTECTION DEVICES IN COMPLIANCE WITH THE NEVADA CONTRACTORS FIELD GUIDE FOR CONSTRUCTION SITE BEST MANAGEMENT PRACTICES (JUNE 2013).</p> <p>10. THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR LOCATING EXISTING UTILITIES. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY THESE LOCATIONS AT THE PROPOSED POINTS OF CONNECTIONS AND IN AREAS OF POSSIBLE CONFLICT WITH NEW UTILITY INSTALLATION, PRIOR TO BEGINNING CONSTRUCTION. POtholing IS REQUIRED. SHOULD THE CONTRACTOR FIND ANY DISCREPANCIES BETWEEN THE CONDITIONS EXISTING IN THE FIELD AND THE INFORMATION SHOWN ON THE CONSTRUCTION DRAWINGS, HE SHALL NOTIFY THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.</p> <p>11. THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR THE CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF PROPER SHORING OF TRENCHES IN ACCORDANCE WITH OCCUPATIONAL SAFETY LAWS. THE DUTIES OF THE ENGINEER DO NOT INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTORS SAFETY IN, ON, OR NEAR THE CONSTRUCTION SITE.</p> <p>12. SHOULD IT APPEAR THAT THE WORK TO BE DONE, OR ANY MATTER RELATIVE THERETO, IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THE CONSTRUCTION PLANS, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR SUCH FURTHER EXPLANATIONS AS MAY BE NECESSARY.</p>	<p>1. ALL WORK SHALL CONFORM TO THE AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARDS PER NAC 445A.67145 (1)(a)</p> <p>2. WATER MAIN SHUTDOWNS/INTERRUPTION OF WATER/FIRE SERVICE; OBTAIN TENTATIVE APPROVAL FROM CARSON CITY WATER UTILITY PRIOR TO PLANNING A SHUTDOWN. APPROVAL IS REQUIRED ONE WORKING DAY PRIOR TO NOTIFICATION OF CUSTOMERS. COMMERCIAL CUSTOMERS SHALL RECEIVE 2 WORKING DAYS WRITTEN NOTICE OF A SHUTDOWN. SPECIAL ARRANGEMENTS INCLUDING NIGHT TIME SHUTDOWNS MAY BE REQUIRED OF THE CONTRACTOR TO ACCOMMODATE CUSTOMER OPERATIONS. RESIDENTIAL CUSTOMERS SHALL RECEIVE 24 HOURS WRITTEN NOTICE. WHEN WORK IS PERFORMED ON THE STREET, THE CITY IS RESPONSIBLE FOR THE NOTIFICATION. THE CONTRACTOR IS RESPONSIBLE IN ALL OTHER CASES. A LIST SHALL BE KEPT BY THE RESPONSIBLE PARTY LISTING THE DATE, TIME AND ADDRESS OF ALL PERSONS NOTIFIED. THE PERSON NOTIFIED SHALL BE INCLUDED ON THE LIST FOR ALL COMMERCIAL CUSTOMERS. CONTACT CARSON CITY WATER UTILITY FOR PHONE NUMBERS WHEN COMMERCIAL CUSTOMERS CANNOT BE LOCATED. THE CONTRACTOR WILL BE SUBJECT TO DAMAGE CLAIMS SHOULD THEY FAIL TO NOTIFY CUSTOMERS OR MAINTAIN DOCUMENTATION OF NOTIFICATION OF CUSTOMERS. THE TOTAL TIME OF ANY WATER SERVICE INTERRUPTION IS LIMITED TO 4 HOURS MAXIMUM. THE CONTRACTOR SHALL NOT OPERATE ANY EXISTING WATER VALVES. WATER MAIN SHUTDOWNS WILL ONLY BE SCHEDULED FOR TUESDAYS, WEDNESDAYS, OR THURSDAYS, EXCLUDING THE WORKING DAYS BEFORE AND AFTER A HOLIDAY. CONTRACTOR SHALL MAKE A WRITTEN REQUEST, TO THE WATER OPERATIONS CHIEF, A MINIMUM OF 10 CALENDAR DAYS IN ADVANCE OF ANY PLANNED SHUTDOWN.</p> <p>3. WATER MAINS (8 INCH THRU 12 INCH) SHALL BE PVC C900, DR 18 (MINIMUM WALL THICKNESS) UNLESS HIGHER PRESSURE IS SPECIFIED ON THE PLANS. WATER SERVICES 2 INCHES OR LESS SHALL BE CTS 901, PE TUBING MINIMUM 200 PSI; WATER SERVICES 3 INCHES OR GREATER SHALL BE 4 INCH MINIMUM DIAMETER PVC C900, DR 18 OR AS SPECIFIED ON THE PLANS.</p> <p>4. MAINTAIN 18 INCHES VERTICAL AND 5 FEET HORIZONTAL SEPARATION BETWEEN ALL UNDERGROUND UTILITY LINES AND WATER LINES. IF WATER LINE IS BELOW POWER LINE OR IS WITHIN 18 INCH VERTICAL SEPARATION OF POWER LINE, POWER/TELEPHONE LINE SHALL BE ENCASED WITH 4 INCHES MINIMUM OF CONCRETE EXTENDING 5 FEET EACH SIDE OF CROSSING. (SEE NV ENERGY SPECS.) CONCRETE ENCASEMENT OF WATER LINES IS NOT ALLOWED.</p> <p>5. ALL HOT TAPS, GREATER THAN 2 INCHES AND LESS THAN 14 INCHES, ARE TO BE PERFORMED BY CARSON CITY WATER UTILITY. THE CONTRACTOR SHALL CONTACT THE WATER OPERATIONS SUPERVISOR AT LEAST 2 WORKING DAYS PRIOR TO SCHEDULING HOT TAP DATE AND TIME (HOT TAPS ARE PERFORMED TUESDAY THRU THURSDAY EXCLUDING THE WORKING DAYS BEFORE AND AFTER A HOLIDAY). PRIOR TO HOT TAPPING, THE SADDLE SHALL BE HYDROSTATICALLY PRESSURE TESTED TO 150 PSI MINIMUM OR THE DESIGN OF PIPE SYSTEM FOR A MINIMUM OF 5 MINUTES. THE TEST SHALL BE PERFORMED IN THE PRESENCE OF THE WATER UTILITY PERSONNEL PRIOR TO PERFORMING THE TAP. FOR ALL TAPS PERFORMED BY THE CONTRACTOR, ALL TAPPING EQUIPMENT SHALL BE INSPECTED BY AND DISINFECTED IN THE PRESENCE OF CITY FORCES PRIOR TO TAPPING A CITY MAIN.</p> <p>6. WATER VALVE MARKERS SHALL BE BLUE CARSONITE UTILITY MARKER (CUM-375), 5 FEET-2 INCHES (5'-2") WITH CARSON CITY WATER VALVE DECAL (CWV-116) OR APPROVED EQUAL. PLACE MARKER NO MORE THAN 5 FEET FROM THE VALVE OR AS DIRECTED BY THE CARSON CITY INSPECTOR.</p> <p>7. REDUCED PRESSURE PRINCIPLE AND DOUBLE CHECK VALVE BACKFLOW ASSEMBLIES SHALL BE APPROVED BY THE CARSON CITY INSPECTOR, AND TESTED BY A CERTIFIED BACKFLOW ASSEMBLY TESTER. AND TEST RESULTS SHALL BE APPROVED BY CARSON CITY WATER UTILITY. FOR NEW WATER METER SETS, THE REQUIRED BACKFLOW PREVENTION ASSEMBLY SHALL BE INSTALLED, INSPECTED, APPROVED AND CERTIFIED TEST RESULTS PROVIDED TO THE CARSON CITY INSPECTOR WITHIN 5 DAYS OF METER SET. UNLESS THE CARSON CITY ENGINEER OR PUBLIC WORKS DIRECTOR APPROVES OTHERWISE, THE SERVICE WILL BE LOCKED OFF IF INSPECTIONS AND CERTIFICATIONS ARE NOT COMPLETED AS SPECIFIED ABOVE. A 25 DOLLAR FEE WILL BE ASSESSED AT TIME OF TURN-ON WHEN LOCK IS REMOVED DURING NORMAL WORKING HOURS. THE FEE WILL BE ASSESSED ON THE BUILDING PERMIT FOR THE INSTALLATION OF THE BACKFLOW DEVICE.</p> <p>8. ALL WATER MAIN, WATER/FIRE SERVICE, AND BACKFLOW PREVENTION INSPECTIONS AND TESTING MUST BE APPROVED PRIOR TO APPROVAL OF ANY CERTIFICATE OF OCCUPANCY.</p> <p>9. DISINFECTION TABLETS SHALL BE PLACED USING TIEBOND MULTI-PURPOSE CLEAR 100% SILICONE OR APPROVED EQUAL FOOD GRADE SILICONE.</p>	<p>1. DISINFECTION [NAC 445A.67145.6] - A WATER MAIN MUST NOT BE PLACED INTO SERVICE AFTER ITS INITIAL CONSTRUCTION UNTIL:</p> <p>(a) THE WATER MAIN HAS BEEN DISINFECTED IN ACCORDANCE WITH AMERICAN WATER WORKS ASSOCIATION STANDARD C651, AS ADOPTED BY REFERENCE IN NAC 445A.6663. THE DISPOSAL OF ANY SPENT CHLORINE SOLUTIONS MUST BE COORDINATED WITH THE DIVISION.</p> <p>(b) AN ANALYSIS OF THE WATER MAIN WHICH INDICATES THAT IT MEETS PRIMARY STANDARDS FOR COLIFORM BACTERIA HAS BEEN OBTAINED AND REPORTED TO THE DIVISION OR THE APPROPRIATE DISTRICT BOARD OF HEALTH.</p> <p>2. PRESSURE TEST [NAC 445A.67145.7] - THE PIPING INSTALLED IN A DISTRIBUTION SYSTEM MUST (BEFORE THE PIPING IS FLUSHED, DISINFECTED OR SAMPLED FOR AN ANALYSIS OF WATER QUALITY), PIPING CONSISTS OF:</p> <p>(a) DUCTILE IRON, BE PRESSURE TESTED IN ACCORDANCE WITH AMERICAN WATER WORKS ASSOCIATION STANDARD C600, AS ADOPTED BY REFERENCE IN NAC 445A.6663.</p> <p>(b) PVC, BE PRESSURE TESTED IN ACCORDANCE WITH AMERICAN WATER WORKS ASSOCIATION STANDARD C605, AS ADOPTED BY REFERENCE IN NAC 445A.6663, OR</p> <p>(c) ANOTHER MATERIAL, BE PRESSURE TESTED IN ACCORDANCE WITH:</p> <p>(1) FOR PUBLIC WATER SYSTEMS IN CARSON CITY, FALLON, RENO, SPARKS, YERINGTON, DOUGLAS COUNTY, LANDER COUNTY, LYON COUNTY, NYE COUNTY OR WASHOE COUNTY, STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, AS ADOPTED BY REFERENCE IN NAC 445A.6663;</p> <p>3. CONSTRUCTION [NAC 445A.67145.8] - DURING THE CONSTRUCTION OF A DISTRIBUTION SYSTEM, ANY OPENINGS IN UNFINISHED PIPING OR APPURTENANCES MUST BE SEALED AT THE END OF EACH WORKING DAY IN SUCH A MANNER AS TO PREVENT THE ENTRY OF DEBRIS AND OTHER ANIMALS, DIRT, TRENCH WATER AND OTHER SOURCES OF POLLUTION OR CONTAMINATION.</p> <p>4. ALL WATERLINE MATERIALS SHALL BE CERTIFIED TO NATIONAL SANITATION FOUNDATION/AMERICAN NATIONAL STANDARDS INSTITUTE (NSF/ANSI) 61 AND 372 STANDARDS (OR APPROVED EQUIVALENT).</p> <p>5. CONTRACTOR SHALL COMPLY WITH THE MANUFACTURERS RECOMMENDATIONS REGARDING MECHANICALLY RESTRAINED JOINTS, AND SHALL ENSURE THAT SUFFICIENT PIPE LENGTH IS RESTRAINED TO RESTRICT MOVEMENT.</p> <p>* THRUST RESTRAINT DESIGN FOR DUCTILE IRON PIPE" BY DUCTILE IRON PIPE RESEARCH ASSOCIATION (BIRMINGHAM, AL) IS AVAILABLE TO DETERMINE RESTRAINED DISTANCE.</p> <p>* CONTRACTOR SHALL VERIFY THRUST RESTRAINT REQUIREMENTS FOR ALL PROPOSED JOINTS. 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<p>3'-0" MIN.</p> <p>7'-0" TO F.F.C.</p> <p>W/ 5' SIDEWALK (SEE NOTES 2 & 3)</p> <p>FIRE HYDRANT WITH STORZ CONNECTOR, PAINT HYDRANT, INSTALL "OUT OF SERVICE" INDICATOR (SEE NOTES 1. & 7.)</p> <p>FLANGE 4" TO 6" ABOVE FINISH GRADE</p> <p>SET HYDRANT PLUMB</p> <p>THRUST BLOCK TO HAVE 2" MIN. CLEARANCE FROM FLANGE. KEEP DRAIN HOLES CLEAR.</p> <p>SHOE</p> <p>THRUST BLOCK (SEE NOTE 5.)</p> <p>TRACER WIRE (BLUE), LOOP 2 TIMES AROUND HYDRANT ABOVE FLANGE (SEE DWG. C-1.2.1)</p> <p>6" DUCTILE IRON PC350 OR PVC C900 DR-18 W/RESTRAINED JOINTS (SEE NOTE 4.)</p> <p>MJ & RESTRAINING GLAND, RESTRAINED FCA FOR FLG X FLG VALVE (SEE NOTE 4.)</p> <p>6" FLOW/MJ OR FLOW/FLG GATE VALVE FOR HOT TAP (SEE NOTE 4 & DWG. C-3.1.4)</p> <p>SPUCE & TAPE TRACER WIRE TO MAIN WIRE IF MAIN WIRE EXISTS. LOOP WIRE AROUND MAIN IF NO MAIN WIRE EXISTS (SEE DWG. C-1.2.1)</p> <p>THRUST BLOCK (SEE NOTE 5.)</p> <p>FLANGED TEE, OR TAPPING SLEEVE (SEE DWG. C-3.1.3)</p> <p>NOTES:</p> <p>1. FIRE HYDRANTS SHALL BE MUELLER SUPER CENTURION 250, WATEROUS 5 1/4 INCH PACER (WB-67-250) OR ANK SERIES 27 NOSTALGIC. ALL HYDRANTS SHALL HAVE HARRINGTON HHS 5 INCH INTEGRAL HYDRANT STORZ, OR APPROVED EQUAL, WITH BLIND CAP & CABLE AND "OUT OF SERVICE" INDICATOR. OPERATING NUT SHALL BE 1-1/2 INCH PENTAGON. VALVE OPENING SHALL BE 5-1/4 INCHES AND OPEN COUNTER-CLOCKWISE. HYDRANTS SHALL HAVE (2) 2-1/2 INCH HOSE NOZZLES WITH AMERICAN NATIONAL HOSE COUPLING THREADS. (NO SUBSTITUTIONS).</p> <p>2. HYDRANT SHALL BE INSTALLED 50 AS TO PROVIDE CLEARANCE IN ALL DIRECTIONS PER DWG. C-3.1.7.1.</p> <p>3. FOR 9 FEET-0 INCHES OR WIDER SIDEWALK OR OFFSET SIDEWALK, HYDRANT SHALL BE 2 FEET-0 INCHES TO FRONT FACE OF CURB. IF SIDEWALK IS NOT PRESENT, HYDRANT SHALL BE LOCATED 7 FEET-0 INCHES TO FRONT FACE OF CURB, EXCEPT IN DOWNTOWN AREA.</p> <p>4. RESTRAINING GLANDS SHALL BE ROMAC GRIPPING PIPE RESTRAINER FOR MECHANICAL JOINT VALVES OR ROMAC RESTRAINED FCA FOR FLANGED VALVES OR APPROVED EQUAL. PIPE RESTRAINT SHALL BE ROMAC "600" SERIES RESTRAINING SYSTEM OR APPROVED EQUAL. RESTRAINING DEVICES SHALL BE FULL CIRCLE (NON POINT) LOADING TYPE. HYDRANT SHOE MAY BE AQUADRIE, RESTRAINED MECHANICAL JOINT (MJ) OR APPROVED EQUAL.</p> <p>5. THRUST BLOCKS SHALL HAVE THREE (3) SQUARE FEET MINIMUM AREA, SHALL BE FORMED AGAINST UNDISTURBED NATIVE SOIL, AND CONFORM TO DWG. C-3.1.4. NO CONCRETE ON HYDRANT DRAIN HOLES OR BOLTS.</p> <p>6. INSPECTION BY THE CARSON CITY INSPECTOR SHALL BE REQUIRED PRIOR TO BACKFILLING.</p> <p>7. HYDRANTS SHALL BE PAINTED INTERNATIONAL ORANGE (RUST-OLEUM 7400 HIGH GLOSS ALLOYD ENAMEL OR APPROVED EQUAL). DO NOT PAINT 5 INCH STORZ, CAP OR CABLE. RECLAIMED WATER HYDRANTS SHALL BE PAINTED PURPLE. INSTALL "OUT OF SERVICE" INDICATOR COLLAR ON 2-1/2 INCH NOZZLE. INDICATOR SHALL BE HIGHLY VISIBLE, YELLOW WITH BLACK LETTERS, 2-1/2 INCH MINIMUM WIDTH WITH 1 INCH LETTERS STATING "OUT OF SERVICE". INDICATOR SHALL BE "CALPICQ" OR EQUAL APPROVED BY THE CARSON CITY ENGINEER OR PUBLIC WORKS DIRECTOR.</p>	<p>1. ALL WORK SHALL CONFORM TO THE AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARDS PER NAC 445A.67145 (1)(a)</p> <p>2. WATER MAIN SHUTDOWNS/INTERRUPTION OF WATER/FIRE SERVICE; OBTAIN TENTATIVE APPROVAL FROM CARSON CITY WATER UTILITY PRIOR TO PLANNING A SHUTDOWN. APPROVAL IS REQUIRED ONE WORKING DAY PRIOR TO NOTIFICATION OF CUSTOMERS. COMMERCIAL CUSTOMERS SHALL RECEIVE 2 WORKING DAYS WRITTEN NOTICE OF A SHUTDOWN. SPECIAL ARRANGEMENTS INCLUDING NIGHT TIME SHUTDOWNS MAY BE REQUIRED OF THE CONTRACTOR TO ACCOMMODATE CUSTOMER OPERATIONS. RESIDENTIAL CUSTOMERS SHALL RECEIVE 24 HOURS WRITTEN NOTICE. WHEN WORK IS PERFORMED ON THE STREET, THE CITY IS RESPONSIBLE FOR THE NOTIFICATION. THE CONTRACTOR IS RESPONSIBLE IN ALL OTHER CASES. A LIST SHALL BE KEPT BY THE RESPONSIBLE PARTY LISTING THE DATE, TIME AND ADDRESS OF ALL PERSONS NOTIFIED. THE PERSON NOTIFIED SHALL BE INCLUDED ON THE LIST FOR ALL COMMERCIAL CUSTOMERS. CONTACT CARSON CITY WATER UTILITY FOR PHONE NUMBERS WHEN COMMERCIAL CUSTOMERS CANNOT BE LOCATED. THE CONTRACTOR WILL BE SUBJECT TO DAMAGE CLAIMS SHOULD THEY FAIL TO NOTIFY CUSTOMERS OR MAINTAIN DOCUMENTATION OF NOTIFICATION OF CUSTOMERS. THE TOTAL TIME OF ANY WATER SERVICE INTERRUPTION IS LIMITED TO 4 HOURS MAXIMUM. THE CONTRACTOR SHALL NOT OPERATE ANY EXISTING WATER VALVES. WATER MAIN SHUTDOWNS WILL ONLY BE SCHEDULED FOR TUESDAYS, WEDNESDAYS, OR THURSDAYS, EXCLUDING THE WORKING DAYS BEFORE AND AFTER A HOLIDAY. CONTRACTOR SHALL MAKE A WRITTEN REQUEST, TO THE WATER OPERATIONS CHIEF, A MINIMUM OF 10 CALENDAR DAYS IN ADVANCE OF ANY PLANNED SHUTDOWN.</p> <p>3. WATER MAINS (8 INCH THRU 12 INCH) SHALL BE PVC C900, DR 18 (MINIMUM WALL THICKNESS) UNLESS HIGHER PRESSURE IS SPECIFIED ON THE PLANS. WATER SERVICES 2 INCHES OR LESS SHALL BE CTS 901, PE TUBING MINIMUM 200 PSI; WATER SERVICES 3 INCHES OR GREATER SHALL BE 4 INCH MINIMUM DIAMETER PVC C900, DR 18 OR AS SPECIFIED ON THE PLANS.</p> <p>4. MAINTAIN 18 INCHES VERTICAL AND 5 FEET HORIZONTAL SEPARATION BETWEEN ALL UNDERGROUND UTILITY LINES AND WATER LINES. IF WATER LINE IS BELOW POWER LINE OR IS WITHIN 18 INCH VERTICAL SEPARATION OF POWER LINE, POWER/TELEPHONE LINE SHALL BE ENCASED WITH 4 INCHES MINIMUM OF CONCRETE EXTENDING 5 FEET EACH SIDE OF CROSSING. (SEE NV ENERGY SPECS.) CONCRETE ENCASEMENT OF WATER LINES IS NOT ALLOWED.</p> <p>5. ALL HOT TAPS, GREATER THAN 2 INCHES AND LESS THAN 14 INCHES, ARE TO BE PERFORMED BY CARSON CITY WATER UTILITY. THE CONTRACTOR SHALL CONTACT THE WATER OPERATIONS SUPERVISOR AT LEAST 2 WORKING DAYS PRIOR TO SCHEDULING HOT TAP DATE AND TIME (HOT TAPS ARE PERFORMED TUESDAY THRU THURSDAY EXCLUDING THE WORKING DAYS BEFORE AND AFTER A HOLIDAY). PRIOR TO HOT TAPPING, THE SADDLE SHALL BE HYDROSTATICALLY PRESSURE TESTED TO 150 PSI MINIMUM OR THE DESIGN OF PIPE SYSTEM FOR A MINIMUM OF 5 MINUTES. THE TEST SHALL BE PERFORMED IN THE PRESENCE OF THE WATER UTILITY PERSONNEL PRIOR TO PERFORMING THE TAP. FOR ALL TAPS PERFORMED BY THE CONTRACTOR, ALL TAPPING EQUIPMENT SHALL BE INSPECTED BY AND DISINFECTED IN THE PRESENCE OF CITY FORCES PRIOR TO TAPPING A CITY MAIN.</p> <p>6. WATER VALVE MARKERS SHALL BE BLUE CARSONITE UTILITY MARKER (CUM-375), 5 FEET-2 INCHES (5'-2") WITH CARSON CITY WATER VALVE DECAL (CWV-116) OR APPROVED EQUAL. PLACE MARKER NO MORE THAN 5 FEET FROM THE VALVE OR AS DIRECTED BY THE CARSON CITY INSPECTOR.</p> <p>7. REDUCED PRESSURE PRINCIPLE AND DOUBLE CHECK VALVE BACKFLOW ASSEMBLIES SHALL BE APPROVED BY THE CARSON CITY INSPECTOR, AND TESTED BY A CERTIFIED BACKFLOW ASSEMBLY TESTER. AND TEST RESULTS SHALL BE APPROVED BY CARSON CITY WATER UTILITY. FOR NEW WATER METER SETS, THE REQUIRED BACKFLOW PREVENTION ASSEMBLY SHALL BE INSTALLED, INSPECTED, APPROVED AND CERTIFIED TEST RESULTS PROVIDED TO THE CARSON CITY INSPECTOR WITHIN 5 DAYS OF METER SET. UNLESS THE CARSON CITY ENGINEER OR PUBLIC WORKS DIRECTOR APPROVES OTHERWISE, THE SERVICE WILL BE LOCKED OFF IF INSPECTIONS AND CERTIFICATIONS ARE NOT COMPLETED AS SPECIFIED ABOVE. A 25 DOLLAR FEE WILL BE ASSESSED AT TIME OF TURN-ON WHEN LOCK IS REMOVED DURING NORMAL WORKING HOURS. THE FEE WILL BE ASSESSED ON THE BUILDING PERMIT FOR THE INSTALLATION OF THE BACKFLOW DEVICE.</p> <p>8. ALL WATER MAIN, WATER/FIRE SERVICE, AND BACKFLOW PREVENTION INSPECTIONS AND TESTING MUST BE APPROVED PRIOR TO APPROVAL OF ANY CERTIFICATE OF OCCUPANCY.</p> <p>9. DISINFECTION TABLETS SHALL BE PLACED USING TIEBOND MULTI-PURPOSE CLEAR 100% SILICONE OR APPROVED EQUAL FOOD GRADE SILICONE.</p>	<p>1. 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CONSTRUCTION [NAC 445A.67145.8] - DURING THE CONSTRUCTION OF A DISTRIBUTION SYSTEM, ANY OPENINGS IN UNFINISHED PIPING OR APPURTENANCES MUST BE SEALED AT THE END OF EACH WORKING DAY IN SUCH A MANNER AS TO PREVENT THE ENTRY OF DEBRIS AND OTHER ANIMALS, DIRT, TRENCH WATER AND OTHER SOURCES OF POLLUTION OR CONTAMINATION.</p> <p>4. ALL WATERLINE MATERIALS SHALL BE CERTIFIED TO NATIONAL SANITATION FOUNDATION/AMERICAN NATIONAL STANDARDS INSTITUTE (NSF/ANSI) 61 AND 372 STANDARDS (OR APPROVED EQUIVALENT).</p> <p>5. CONTRACTOR SHALL COMPLY WITH THE MANUFACTURERS RECOMMENDATIONS REGARDING MECHANICALLY RESTRAINED JOINTS, AND SHALL ENSURE THAT SUFFICIENT PIPE LENGTH IS RESTRAINED TO RESTRICT MOVEMENT.</p> <p>* THRUST RESTRAINT DESIGN FOR DUCTILE IRON PIPE" BY DUCTILE IRON PIPE RESEARCH ASSOCIATION (BIRMINGHAM, AL) IS AVAILABLE TO DETERMINE RESTRAINED DISTANCE.</p> <p>* CONTRACTOR SHALL VERIFY THRUST RESTRAINT REQUIREMENTS FOR ALL PROPOSED JOINTS. CONCRETE THRUST BLOCKING MAY BE USED WHEN CONNECTING TO EXISTING PIPING THAT HAS INSUFFICIENT THRUST RESTRAINT.</p> <p>* RESTRAINED JOINT PIPE AND FITTINGS SHALL BE IN ACCORDANCE WITH AWWA, ASTM AND MANUFACTURER REQUIREMENTS.</p> <p>* RESTRAINED PUSH-ON JOINTS FOR PIPE AND FITTINGS SHALL BE DESIGNED FOR 150 PSI WATER OPERATING PRESSURE.</p> <p>* RESTRAINED PUSH-ON JOINT PIPE AND FITTINGS SHALL BE CAPABLE OF BEING DEFLECTED AFTER ASSEMBLY.</p> <p>6. 18-8 STAINLESS STEEL NUTS, BOLTS AND WASHERS SHALL BE USED IN ALL UNDERGROUND OR SUBMERGED APPLICATIONS. THREADS SHALL BE UNC-ROLLED THREADS ON BOLTS COATED TO PREVENT GALING.</p> <p>7. ALL WATER MAIN, WATER/FIRE SERVICE, AND BACKFLOW PREVENTION INSPECTIONS AND TESTING MUST BE APPROVED PRIOR TO APPROVAL OF ANY CERTIFICATE OF OCCUPANCY.</p> <p>8. DISINFECTION TABLETS SHALL BE PLACED USING TIEBOND MULTI-PURPOSE CLEAR 100% SILICONE OR APPROVED EQUAL FOOD GRADE SILICONE.</p>	<table><tr><th>NO.</th><th>REVISION</th><th>DATE</th><th>STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION</th><th>SECTION CARSON CITY</th></tr><tr><td>1</td><td>NOTE 1 & 6</td><td>9/17</td><td></td><td>DRAWING NO. C-3.2.7 (203,307)</td></tr><tr><td></td><td>APPROVED BY: </td><td>9/17</td><td></td><td>DATE SEP 2017</td></tr></table> <p>BACKFLOW PREVENTER ASSEMBLY (REDUCED PRESSURE TYPE)</p>	NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION CARSON CITY	1	NOTE 1 & 6	9/17		DRAWING NO. C-3.2.7 (203,307)		APPROVED BY:	9/17		DATE SEP 2017	<p>SET BOX & LID TO GRADE (SEE DWG. C-3.1.4)</p> <p>FINISH GRADE</p> <p>6" PVC RISER TO EXTEND MIN. OF 6" INTO RISER BOX. PIPE SHALL BE PLUMB AND CENTERED ON HORIZONTAL PIPE FITTING (SEE NOTE 2.)</p> <p>LINE LOCATION BOX & LID (SEE DWG. C-1.2.2)</p> <p>SOLID MASONRY BLOCK (TYP)</p> <p>EXTEND TRACER WIRE UP INTO RISER BOX (SEE NOTE 1. & DWG. C-1.2.1)</p> <p>TRACER WIRE TAPED EVERY 10 FT. TO PIPE (SEE DWG. C-1.2.1)</p> <p>TYPICAL SECTION NTS</p> <p>NOTES:</p> <p>1. WIRE SHALL BE CONTINUOUS IN RISER AND SHALL NOT BE SPLICED WITHIN 10 FEET OF RISER.</p> <p>2. RISER COLOR SHALL BE BLUE FOR WATER APPLICATIONS, PURPLE FOR RECLAIMED WATER APPLICATIONS, AND GREEN FOR SANITARY SEWER APPLICATIONS.</p>
NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION CARSON CITY															
1	NOTE 1 & 6	9/17		DRAWING NO. C-3.2.7 (203,307)															
	APPROVED BY:	9/17		DATE SEP 2017															
<p>3'-0" MIN.</p> <p>7'-0" TO F.F.C.</p> <p>W/ 5' SIDEWALK (SEE NOTES 2 & 3)</p> <p>FIRE HYDRANT WITH STORZ CONNECTOR, PAINT HYDRANT, INSTALL "OUT OF SERVICE" INDICATOR (SEE NOTES 1. & 7.)</p> <p>FLANGE 4" TO 6" ABOVE FINISH GRADE</p> <p>SET HYDRANT PLUMB</p> <p>THRUST BLOCK TO HAVE 2" MIN. CLEARANCE FROM FLANGE. KEEP DRAIN HOLES CLEAR.</p> <p>SHOE</p> <p>THRUST BLOCK (SEE NOTE 5.)</p> <p>TRACER WIRE (BLUE), LOOP 2 TIMES AROUND HYDRANT ABOVE FLANGE (SEE DWG. C-1.2.1)</p> <p>6" DUCTILE IRON PC350 OR PVC C900 DR-18 W/RESTRAINED JOINTS (SEE NOTE 4.)</p> <p>MJ & RESTRAINING GLAND, RESTRAINED FCA FOR FLG X FLG VALVE (SEE NOTE 4.)</p> <p>6" FLOW/MJ OR FLOW/FLG GATE VALVE FOR HOT TAP (SEE NOTE 4 & DWG. C-3.1.4)</p> <p>SPUCE & TAPE TRACER WIRE TO MAIN WIRE IF MAIN WIRE EXISTS. LOOP WIRE AROUND MAIN IF NO MAIN WIRE EXISTS (SEE DWG. C-1.2.1)</p> <p>THRUST BLOCK (SEE NOTE 5.)</p> <p>FLANGED TEE, OR TAPPING SLEEVE (SEE DWG. C-3.1.3)</p> <p>NOTES:</p> <p>1. FIRE HYDRANTS SHALL BE MUELLER SUPER CENTURION 250, WATEROUS 5 1/4 INCH PACER (WB-67-250) OR ANK SERIES 27 NOSTALGIC. ALL HYDRANTS SHALL HAVE HARRINGTON HHS 5 INCH INTEGRAL HYDRANT STORZ, OR APPROVED EQUAL, WITH BLIND CAP & CABLE AND "OUT OF SERVICE" INDICATOR. OPERATING NUT SHALL BE 1-1/2 INCH PENTAGON. VALVE OPENING SHALL BE 5-1/4 INCHES AND OPEN COUNTER-CLOCKWISE. HYDRANTS SHALL HAVE (2) 2-1/2 INCH HOSE NOZZLES WITH AMERICAN NATIONAL HOSE COUPLING THREADS. (NO SUBSTITUTIONS).</p> <p>2. HYDRANT SHALL BE INSTALLED 50 AS TO PROVIDE CLEARANCE IN ALL DIRECTIONS PER DWG. C-3.1.7.1.</p> <p>3. FOR 9 FEET-0 INCHES OR WIDER SIDEWALK OR OFFSET SIDEWALK, HYDRANT SHALL BE 2 FEET-0 INCHES TO FRONT FACE OF CURB. IF SIDEWALK IS NOT PRESENT, HYDRANT SHALL BE LOCATED 7 FEET-0 INCHES TO FRONT FACE OF CURB, EXCEPT IN DOWNTOWN AREA.</p> <p>4. RESTRAINING GLANDS SHALL BE ROMAC GRIPPING PIPE RESTRAINER FOR MECHANICAL JOINT VALVES OR ROMAC RESTRAINED FCA FOR FLANGED VALVES OR APPROVED EQUAL. PIPE RESTRAINT SHALL BE ROMAC "600" SERIES RESTRAINING SYSTEM OR APPROVED EQUAL. RESTRAINING DEVICES SHALL BE FULL CIRCLE (NON POINT) LOADING TYPE. HYDRANT SHOE MAY BE AQUADRIE, RESTRAINED MECHANICAL JOINT (MJ) OR APPROVED EQUAL.</p> <p>5. THRUST BLOCKS SHALL HAVE THREE (3) SQUARE FEET MINIMUM AREA, SHALL BE FORMED AGAINST UNDISTURBED NATIVE SOIL, AND CONFORM TO DWG. C-3.1.4. NO CONCRETE ON HYDRANT DRAIN HOLES OR BOLTS.</p> <p>6. INSPECTION BY THE CARSON CITY INSPECTOR SHALL BE REQUIRED PRIOR TO BACKFILLING.</p> <p>7. HYDRANTS SHALL BE PAINTED INTERNATIONAL ORANGE (RUST-OLEUM 7400 HIGH GLOSS ALLOYD ENAMEL OR APPROVED EQUAL). DO NOT PAINT 5 INCH STORZ, CAP OR CABLE. RECLAIMED WATER HYDRANTS SHALL BE PAINTED PURPLE. INSTALL "OUT OF SERVICE" INDICATOR COLLAR ON 2-1/2 INCH NOZZLE. INDICATOR SHALL BE HIGHLY VISIBLE, YELLOW WITH BLACK LETTERS, 2-1/2 INCH MINIMUM WIDTH WITH 1 INCH LETTERS STATING "OUT OF SERVICE". INDICATOR SHALL BE "CALPICQ" OR EQUAL APPROVED BY THE CARSON CITY ENGINEER OR PUBLIC WORKS DIRECTOR.</p>	<p>1. ALL WORK SHALL CONFORM TO THE AMERICAN WATER WORKS ASSOCIATION (AWWA) STANDARDS PER NAC 445A.67145 (1)(a)</p> <p>2. WATER MAIN SHUTDOWNS/INTERRUPTION OF WATER/FIRE SERVICE; OBTAIN TENTATIVE APPROVAL FROM CARSON CITY WATER UTILITY PRIOR TO PLANNING A SHUTDOWN. APPROVAL IS REQUIRED ONE WORKING DAY PRIOR TO NOTIFICATION OF CUSTOMERS. COMMERCIAL CUSTOMERS SHALL RECEIVE 2 WORKING DAYS WRITTEN NOTICE OF A SHUTDOWN. SPECIAL ARRANGEMENTS INCLUDING NIGHT TIME SHUTDOWNS MAY BE REQUIRED OF THE CONTRACTOR TO ACCOMMODATE CUSTOMER OPERATIONS. RESIDENTIAL CUSTOMERS SHALL RECEIVE 24 HOURS WRITTEN NOTICE. WHEN WORK IS PERFORMED ON THE STREET, THE CITY IS RESPONSIBLE FOR THE NOTIFICATION. THE CONTRACTOR IS RESPONSIBLE IN ALL OTHER CASES. A LIST SHALL BE KEPT BY THE RESPONSIBLE PARTY LISTING THE DATE, TIME AND ADDRESS OF ALL PERSONS NOTIFIED. THE PERSON NOTIFIED SHALL BE INCLUDED ON THE LIST FOR ALL COMMERCIAL CUSTOMERS. CONTACT CARSON CITY WATER UTILITY FOR PHONE NUMBERS WHEN COMMERCIAL CUSTOMERS CANNOT BE LOCATED. THE CONTRACTOR WILL BE SUBJECT TO DAMAGE CLAIMS SHOULD THEY FAIL TO NOTIFY CUSTOMERS OR MAINTAIN DOCUMENTATION OF NOTIFICATION OF CUSTOMERS. THE TOTAL TIME OF ANY WATER SERVICE INTERRUPTION IS LIMITED TO 4 HOURS MAXIMUM. THE CONTRACTOR SHALL NOT OPERATE ANY EXISTING WATER VALVES. WATER MAIN SHUTDOWNS WILL ONLY BE SCHEDULED FOR TUESDAYS, WEDNESDAYS, OR THURSDAYS, EXCLUDING THE WORKING DAYS BEFORE AND AFTER A HOLIDAY. CONTRACTOR SHALL MAKE A WRITTEN REQUEST, TO THE WATER OPERATIONS CHIEF, A MINIMUM OF 10 CALENDAR DAYS IN ADVANCE OF ANY PLANNED SHUTDOWN.</p> <p>3. WATER MAINS (8 INCH THRU 12 INCH) SHALL BE PVC C900, DR 18 (MINIMUM WALL THICKNESS) UNLESS HIGHER PRESSURE IS SPECIFIED ON THE PLANS. WATER SERVICES 2 INCHES OR LESS SHALL BE CTS 901, PE TUBING MINIMUM 200 PSI; WATER SERVICES 3 INCHES OR GREATER SHALL BE 4 INCH MINIMUM DIAMETER PVC C900, DR 18 OR AS SPECIFIED ON THE PLANS.</p> <p>4. MAINTAIN 18 INCHES VERTICAL AND 5 FEET HORIZONTAL SEPARATION BETWEEN ALL UNDERGROUND UTILITY LINES AND WATER LINES. IF WATER LINE IS BELOW POWER LINE OR IS WITHIN 18 INCH VERTICAL SEPARATION OF POWER LINE, POWER/TELEPHONE LINE SHALL BE ENCASED WITH 4 INCHES MINIMUM OF CONCRETE EXTENDING 5 FEET EACH SIDE OF CROSSING. (SEE NV ENERGY SPECS.) CONCRETE ENCASEMENT OF WATER LINES IS NOT ALLOWED.</p> <p>5. ALL HOT TAPS, GREATER THAN 2 INCHES AND LESS THAN 14 INCHES, ARE TO BE PERFORMED BY CARSON CITY WATER UTILITY. THE CONTRACTOR SHALL CONTACT THE WATER OPERATIONS SUPERVISOR AT LEAST 2 WORKING DAYS PRIOR TO SCHEDULING HOT TAP DATE AND TIME (HOT TAPS ARE PERFORMED TUESDAY THRU THURSDAY EXCLUDING THE WORKING DAYS BEFORE AND AFTER A HOLIDAY). PRIOR TO HOT TAPPING, THE SADDLE SHALL BE HYDROSTATICALLY PRESSURE TESTED TO 150 PSI MINIMUM OR THE DESIGN OF PIPE SYSTEM FOR A MINIMUM OF 5 MINUTES. THE TEST SHALL BE PERFORMED IN THE PRESENCE OF THE WATER UTILITY PERSONNEL PRIOR TO PERFORMING THE TAP. FOR ALL TAPS PERFORMED BY THE CONTRACTOR, ALL TAPPING EQUIPMENT SHALL BE INSPECTED BY AND DISINFECTED IN THE PRESENCE OF CITY FORCES PRIOR TO TAPPING A CITY MAIN.</p> <p>6. WATER VALVE MARKERS SHALL BE BLUE CARSONITE UTILITY MARKER (CUM-375), 5 FEET-2 INCHES (5'-2") WITH CARSON CITY WATER VALVE DECAL (CWV-116) OR APPROVED EQUAL. PLACE MARKER NO MORE THAN 5 FEET FROM THE VALVE OR AS DIRECTED BY THE CARSON CITY INSPECTOR.</p> <p>7. REDUCED PRESSURE PRINCIPLE AND DOUBLE CHECK VALVE BACKFLOW ASSEMBLIES SHALL BE APPROVED BY THE CARSON CITY INSPECTOR, AND TESTED BY A CERTIFIED BACKFLOW ASSEMBLY TESTER. AND TEST RESULTS SHALL BE APPROVED BY CARSON CITY WATER UTILITY. FOR NEW WATER METER SETS, THE REQUIRED BACKFLOW PREVENTION ASSEMBLY SHALL BE INSTALLED, INSPECTED, APPROVED AND CERTIFIED TEST RESULTS PROVIDED TO THE CARSON CITY INSPECTOR WITHIN 5 DAYS OF METER SET. UNLESS THE CARSON CITY ENGINEER OR PUBLIC WORKS DIRECTOR APPROVES OTHERWISE, THE SERVICE WILL BE LOCKED OFF IF INSPECTIONS AND CERTIFICATIONS ARE NOT COMPLETED AS SPECIFIED ABOVE. A 25 DOLLAR FEE WILL BE ASSESSED AT TIME OF TURN-ON WHEN LOCK IS REMOVED DURING NORMAL WORKING HOURS. THE FEE WILL BE ASSESSED ON THE BUILDING PERMIT FOR THE INSTALLATION OF THE BACKFLOW DEVICE.</p> <p>8. ALL WATER MAIN, WATER/FIRE SERVICE, AND BACKFLOW PREVENTION INSPECTIONS AND TESTING MUST BE APPROVED PRIOR TO APPROVAL OF ANY CERTIFICATE OF OCCUPANCY.</p> <p>9. DISINFECTION TABLETS SHALL BE PLACED USING TIEBOND MULTI-PURPOSE CLEAR 100% SILICONE OR APPROVED EQUAL FOOD GRADE SILICONE.</p>	<p>1. DISINFECTION [NAC 445A.67145.6] - A WATER MAIN MUST NOT BE PLACED INTO SERVICE AFTER ITS INITIAL CONSTRUCTION UNTIL:</p> <p>(a) THE WATER MAIN HAS BEEN DISINFECTED IN ACCORDANCE WITH AMERICAN WATER WORKS ASSOCIATION STANDARD C651, AS ADOPTED BY REFERENCE IN NAC 445A.6663. THE DISPOSAL OF ANY SPENT CHLORINE SOLUTIONS MUST BE COORDINATED WITH THE DIVISION.</p> <p>(b) AN ANALYSIS OF THE WATER MAIN WHICH INDICATES THAT IT MEETS PRIMARY STANDARDS FOR COLIFORM BACTERIA HAS BEEN OBTAINED AND REPORTED TO THE DIVISION OR THE APPROPRIATE DISTRICT BOARD OF HEALTH.</p> <p>2. PRESSURE TEST [NAC 445A.67145.7] - THE PIPING INSTALLED IN A DISTRIBUTION SYSTEM MUST (BEFORE THE PIPING IS FLUSHED, DISINFECTED OR SAMPLED FOR AN ANALYSIS OF WATER QUALITY), PIPING CONSISTS OF:</p> <p>(a) DUCTILE IRON, BE PRESSURE TESTED IN ACCORDANCE WITH AMERICAN WATER WORKS ASSOCIATION STANDARD C600, AS ADOPTED BY REFERENCE IN NAC 445A.6663.</p> <p>(b) PVC, BE PRESSURE TESTED IN ACCORDANCE WITH AMERICAN WATER WORKS ASSOCIATION STANDARD C605, AS ADOPTED BY REFERENCE IN NAC 445A.6663, OR</p> <p>(c) ANOTHER MATERIAL, BE PRESSURE TESTED IN ACCORDANCE WITH:</p> <p>(1) FOR PUBLIC WATER SYSTEMS IN CARSON CITY, FALLON, RENO, SPARKS, YERINGTON, DOUGLAS COUNTY, LANDER COUNTY, LYON COUNTY, NYE COUNTY OR WASHOE COUNTY, STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, AS ADOPTED BY</p>																	

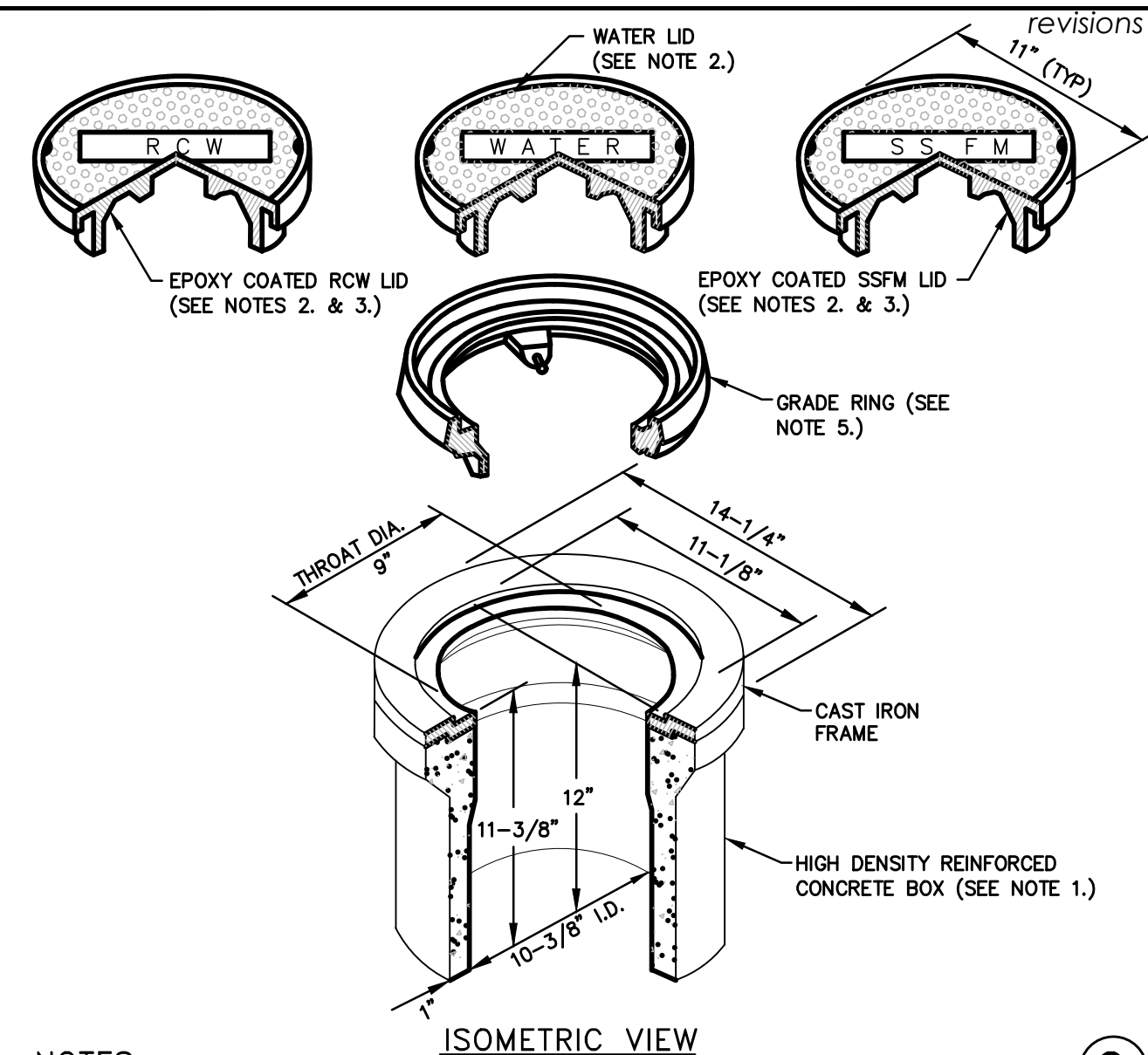


NOTES:

- SUPPORT BLOCKING SHALL BE POURED AGAINST UNDISTURBED SOIL AND NOT PREVENT ACCESS TO BOLT ASSEMBLY OR VALVE JOINTS.
- CONCRETE SHALL CONFORM TO THE SSPWC SECTION 337.10. REBAR SHALL ONLY BE USED WHEN THE VALVE BOX IS LOCATED OUTSIDE PAVED AREAS.
- THE CONCRETE COLLAR SHALL BE LEFT 2 1/2 INCHES - 3 INCHES BELOW FINISHED ASPHALT SURFACE. APPLY AN APPROVED TACK COAT (CONFORMING TO THE SSPWC SECTION 316) AND FILL BETWEEN ADJACENT PAVEMENT AND FRAME WITH TYPE 3 PG 64-22 PAVING (CONFORMING TO THE SSPWC SECTION 320). APPLY FOG SEAL (CONFORMING TO THE SSPWC SECTION 317) TO THE ASPHALT SURFACE. ALL CUTS IN PAVING SHALL BE STRAIGHT AND EVEN. EXCEPTION: WHEN STRUCTURE NOT LOCATED IN ASPHALT PAVEMENT OR IN AN UNPAVED AREA, EXTEND CONCRETE TO FINISH GRADE.
- LIDS SHALL BE SET FLUSH WITH FINISH GRADE UNLESS OTHERWISE NOTED.
- WHEN LOCATED IN NDOT RIGHT-OF-WAY, CONCRETE COLLAR SHALL CONFORM TO NDOT STANDARD PLAN SHEET R-4.3.3 AND STANDARD SPECIFICATION 609.
- VALVES ON FIRE LINES SHALL BE UL/FM APPROVED AND MEET ALL APPLICABLE NFPA REQUIREMENTS.
- PLACER WATERWORKS INC. VALVE STEM EXTENSIONS OR APPROVED EQUAL SHALL BE USED AS NEEDED TO MAINTAIN A 28 INCH TO 60 INCH DEPTH FROM TOP OF VALVE CAN TO TOP OF OPERATOR NUT. VALVE STEM EXTENSIONS SHALL BE STEEL WITH 2 INCH OPERATOR NUTS AND 5.5 INCH STEEL CENTERING RING. ALL PARTS TO BE POWDER COATED BLUE (T009-BLUE). VALVE NUT AND VALVE STEM EXTENSION SHALL BE DRILLED AND PINNED TOGETHER WITH 5/8 INCH X 3 INCH STAINLESS SPRING PIN.

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION
1	STEM EXTN	12/18		CARSON CITY
2	8" RISER	8/19		DRAWING NO. C-3.1.4 (203,307)
	APPROVED BY:	8/19		DATE AUG 2019

GATE VALVE



NOTES:

- VALVE BOX AND LID SHALL BE H20 TRAFFIC RATED WITH A MINIMUM INSIDE DIAMETER OF 10 INCHES (CHRISTY G5 TRAFFIC VALVE BOX & LID).
- CAST IRON LID SHALL BE MARKED AT THE FACTORY "WATER" FOR WATER APPLICATIONS, "RECLAIMED WATER" OR "RCW" FOR RECLAIMED WATER APPLICATIONS, AND "SS FORCE MAIN" OR "SSFM" FOR SANITARY SEWER APPLICATIONS.
- FOR RECLAIMED WATER AND SANITARY SEWER APPLICATIONS, CAST IRON LID SHALL BE EPOXY COATED AT THE FACTORY, OR POWDER COATED, COLOR SHALL BE PURPLE FOR RECLAIMED WATER APPLICATIONS AND GREEN FOR SANITARY SEWER APPLICATIONS.
- VALVE BOX SHALL BE SET OR ADJUSTED TO GRADE PER DRAWING NO. C-3.1.4. RISER FOR ADJUSTED VALVE BOX SHALL BE PER DRAWING NO. C-3.1.4. FOR OVERLAY ADJUSTMENTS, RISER WILL NOT REQUIRE REPLACEMENT OR EXTENSION IF IT EXTENDS A MINIMUM OF 2 INCHES INTO ADJUSTED VALVE BOX.
- GRADE RING IS NOT ALLOWED FOR NEW VALVE BOX INSTALLATIONS. CAST IRON GRADE RING (CHRISTY G5 GRADE RING) MAY BE USED FOR OVERLAY ADJUSTMENTS WHEN OVERLAY DEPTH EQUALS THE GRADE RING DEPTH. NO MORE THAN ONE GRADE RING ALLOWED PER BOX.

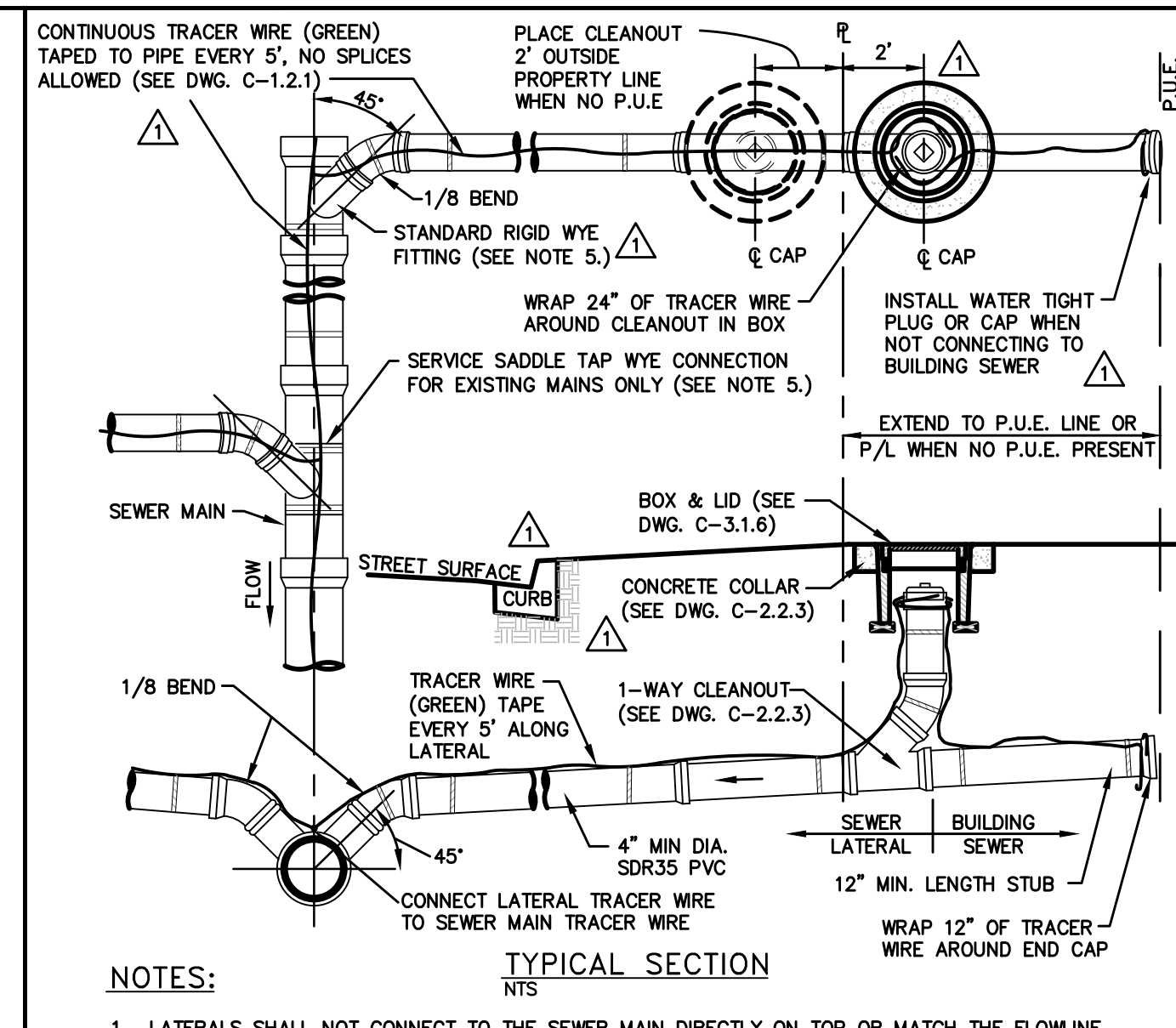
NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION
1				CARSON CITY
	APPROVED BY:	9/17		DRAWING NO. C-3.1.6 (203,306,307)
				DATE SEP 2017

VALVE BOX & LID

- ALL SEWER MAINS AND LATERALS IN THE RIGHT-OF-WAY/EASEMENT SHALL BE PVC SDR35 UNLESS OTHERWISE APPROVED BY CARSON CITY ENGINEER. C900 PVC MAY BE SUBSTITUTED FOR SDR35 TO MEET NDEP BUREAU OF SAFE DRINKING WATER SEPARATION REQUIREMENTS.
- NON-FLEXIBLE TRANSITION COUPLINGS ARE REQUIRED WHEN CONNECTING NEW SEWER LINES TO EXISTING LINES AND/OR FITTINGS, SEE DWG. C-2.1.6.
- THE CONTRACTOR SHALL INSTALL A PLUG AT THE POINT OF EXTENSION OF A SEWER MAIN PRIOR TO THE START OF CONSTRUCTION. THE PLUG SHALL REMAIN IN PLACE UNTIL ALL LINES HAVE BEEN INSPECTED, TESTED, CLEANED AND FLUSHED. REMOVAL OF THE PLUG BY THE CONTRACTOR PRIOR TO APPROVAL IS A VIOLATION OF THE CARSON CITY MUNICIPAL CODE AND MAY RESULT IN FINES UP TO \$1,000 A DAY.
- SEWER LINES SHALL BE TESTED PER SECTION 336.03.07 OF THE SSPWC AS ADOPTED BY CARSON CITY. AN AIR PRESSURE TEST PER SECTION 336.03.07.04 AND A DEFLECTION TEST PER SECTION 336.03.09 OF THE CARSON CITY AMENDMENT TO THE SSPWC SHALL BE PERFORMED ON ALL SEWER LINES.
- WARNING TAPE SHALL BE INSTALLED 12 INCHES ABOVE ALL SEWER MAINS AND LATERALS. TAPE WIDTH SHALL BE 3 INCHES; THICKNESS SHALL BE FOUR 4 MIL. OR GREATER AND SHALL BE GREEN AND BEAR LARGE PRINTING DENOTING "CAUTION BURIED SEWER LINE BELOW" OR EQUIVALENT WORDING.
- TRACER WIRE SHALL BE ATTACHED TO ALL SEWER MAINS AND LATERALS. SEE DWG C-2.2.1.

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION
1	NOTES 1,5,6	9/17		CARSON CITY
	APPROVED BY:	9/17		DRAWING NO. C-2.1.1 (204,306,323)
				DATE SEP 2017

SEWER GENERAL NOTES

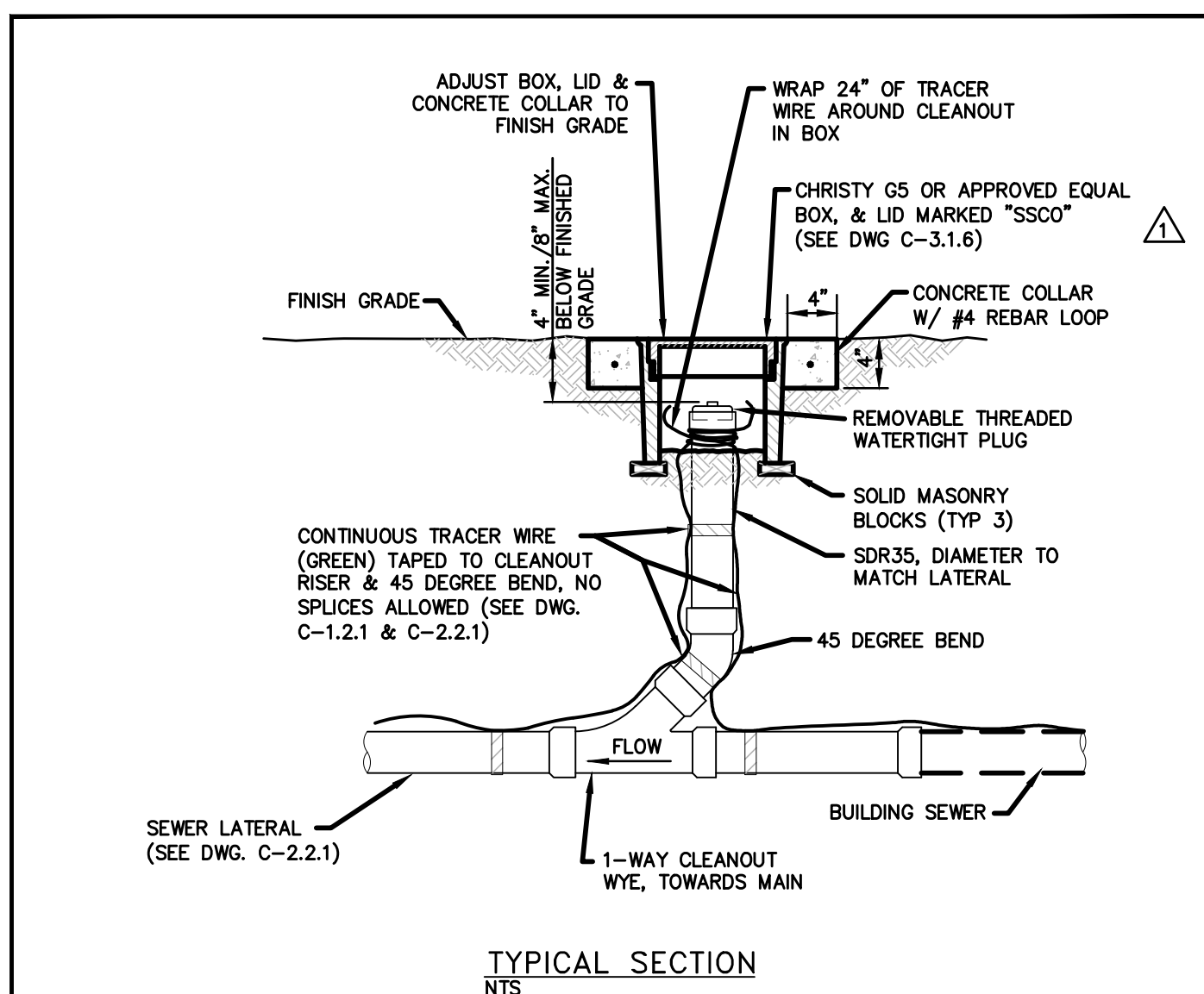


NOTES:

- LATERALS SHALL NOT CONNECT TO THE SEWER MAIN DIRECTLY ON TOP OR MATCH THE FLOWLINE OF THE PIPE.
- SEWER LATERALS SHALL HAVE A MINIMUM SLOPE OF 2%. PLANS SHALL INDICATE INVERT ELEV. REQUIRED TO SERVE PROPERTY AND CLEAR UNDERGROUND OBSTRUCTIONS.
- ALL JOINTS ON SEWER LATERAL PIPE WITHIN THE RIGHT-OF-WAY SHALL BE GASKETED BELL TYPE UNLESS OTHERWISE APPROVED BY THE CARSON CITY ENGINEER OR PUBLIC WORKS DIRECTOR.
- LATERAL SHALL BE INSTALLED PERPENDICULAR TO THE MAIN UNLESS OTHERWISE APPROVED BY THE CARSON CITY ENGINEER OR PUBLIC WORKS DIRECTOR.
- USE OF SEWER SERVICE TAP SADDLE CONNECTIONS SHALL NOT BE ALLOWED FOR NEW SEWER MAIN CONSTRUCTION. WHEN A TAP SADDLE CONNECTION IS TO BE USED ON AN EXISTING SEWER MAIN, IT SHALL BE A WYE SADDLE AND BE INSTALLED PER DWG. C-2.2.2.
- DISCONTINUANCE OF USE OF AN EXISTING SEWER LATERAL REQUIRES ABANDONMENT OF THE LATERAL. CUT, REMOVE 1 FOOT OF EXISTING LATERAL AND CAP BOTH ENDS OF THE EXISTING SEWER LATERAL TO BE ABANDONED WITHIN 6 INCHES OF THE SEWER MAIN. INSPECTION BY CARSON CITY SEWER UTILITY IS REQUIRED PRIOR TO BACKFILL.
- PROPERTY OWNER SHALL BE RESPONSIBLE FOR OPERATION, MAINTENANCE AND REPAIR OF THE SEWER LATERAL WITHIN THE PUBLIC RIGHT-OF-WAY PER CMC 12.05.050.5.

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION
1	REVISED ALL	9/17		CARSON CITY
	APPROVED BY:	9/17		DRAWING NO. C-2.2.1 (203,306)
				DATE SEP 2017

SEWER LATERAL

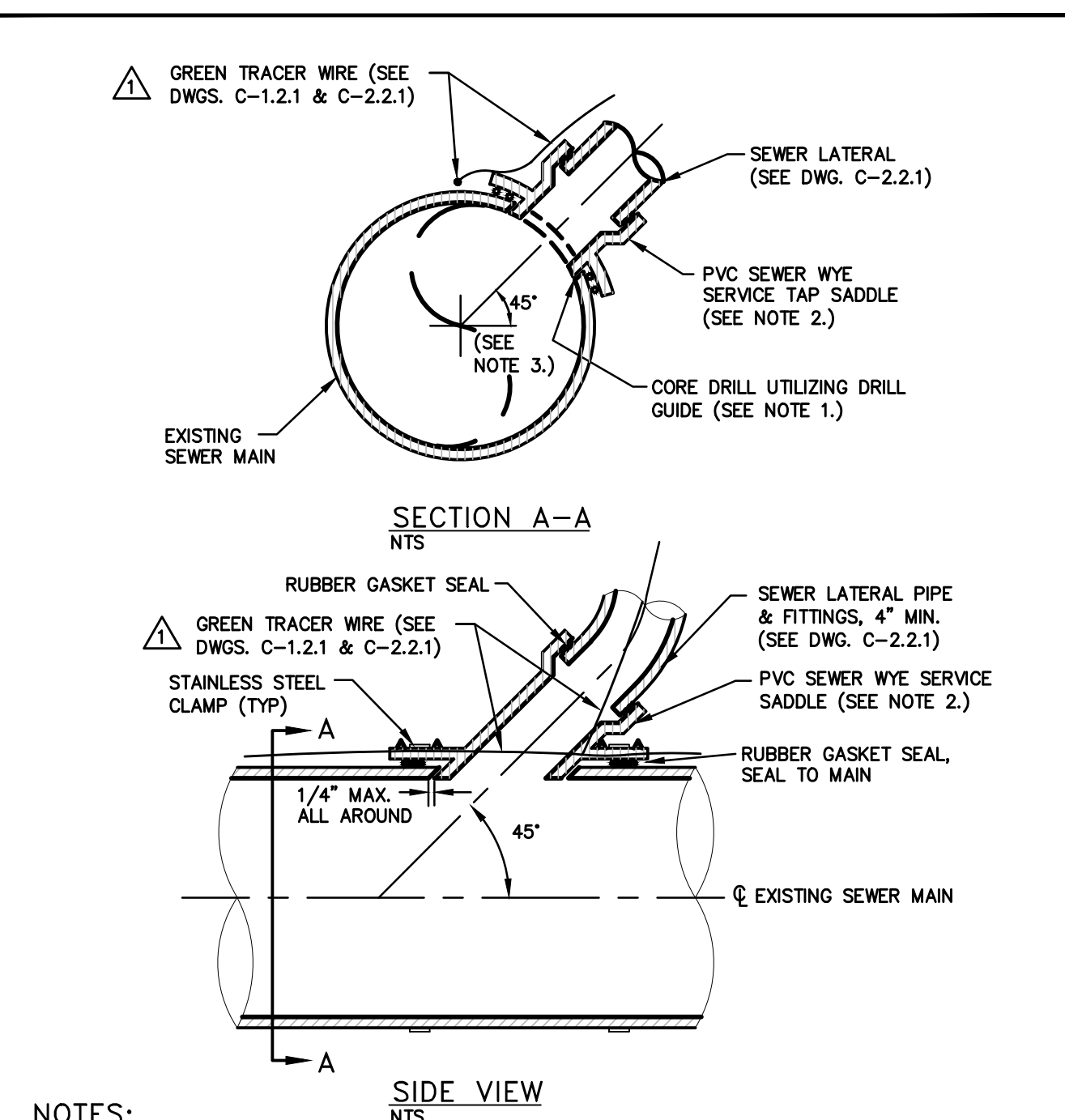


NOTES:

- CONCRETE SHALL CONFORM TO THE SSPWC SECTION 337.10.
- LIDS SHALL BE SET FLUSH WITH FINISH GRADE UNLESS OTHERWISE NOTED.
- WHEN LOCATED IN NDOT RIGHT-OF-WAY, CONCRETE COLLAR SHALL CONFORM TO NDOT STANDARD PLAN SHT R-4.3.3 AND STANDARD SPECIFICATION 609.

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION
1	REVISED	9/17		CARSON CITY
	APPROVED BY:	9/17		DRAWING NO. C-2.2.3 (203,306)
				DATE SEP 2017

SEWER CLEANOUT

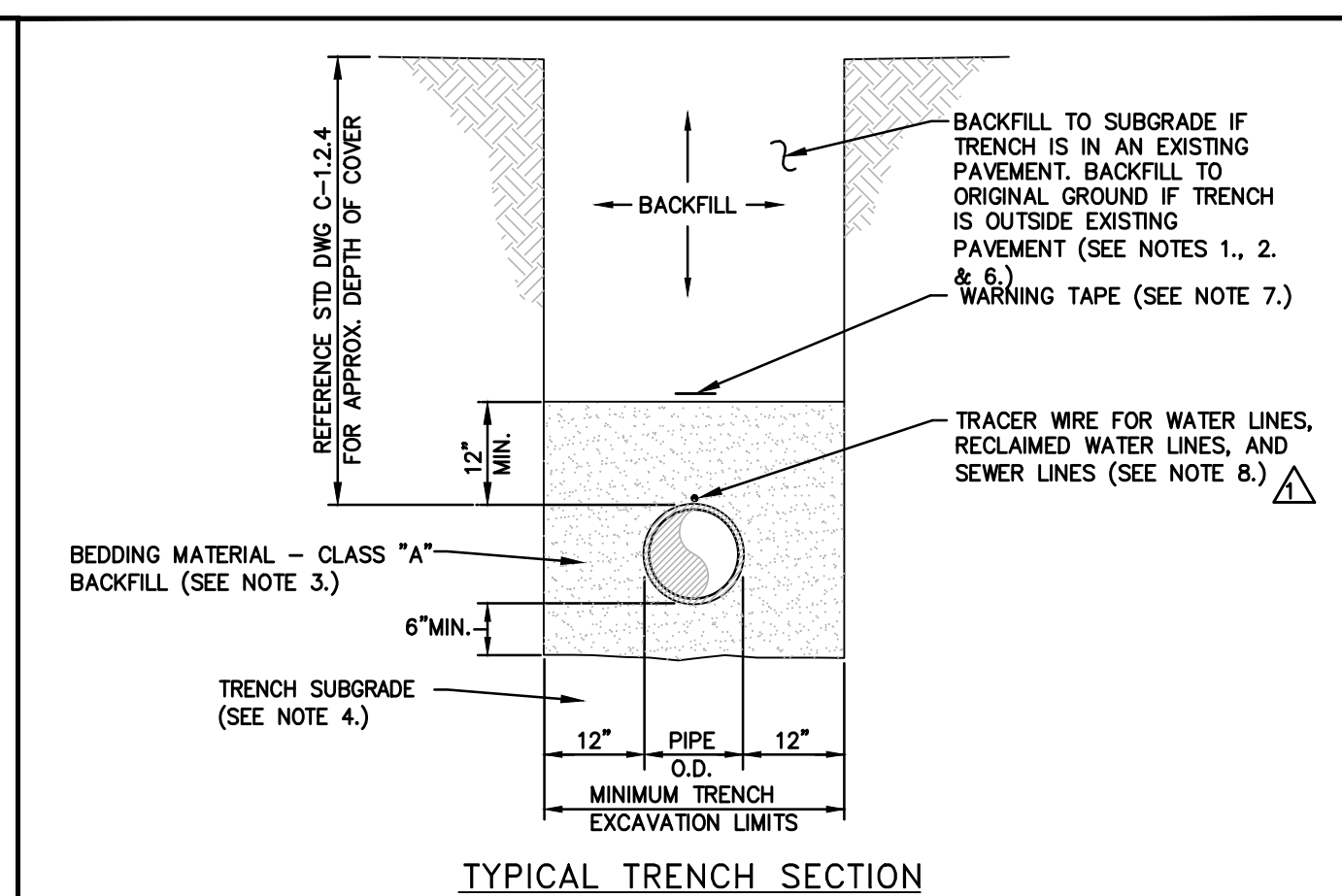


NOTES:

- EXISTING SEWER MAINS SHALL BE CORE DRILLED UTILIZING A DRILL GUIDE FOR A WYE SADDLE AND A CORE DRILL WITH A LENGTH EXCEEDING THE LATERAL DIAMETER, INSERT-A-DRILL ID175 & EXTRA LONG HOLE SAW OR APPROVED EQUAL. DIAMOND CORE BITS SHALL BE USED ON NON-PVC MAINS.
- SERVICE TAP SADDLES SHALL BE PVC SEWER WYE SADDLES. A ROMAC STYLE "08" SEWER SADDLE OR APPROVED EQUAL MAY BE USED ON EXISTING SEWER MAINS ONLY WHEN MAIN IS NOT PVC.
- SADDLES SHALL BE INSTALLED AT 45 DEGREES TO MAIN AS SHOWN IN SECTION A-A. IN NO CASE SHALL A LATERAL CONNECTING TO THE EXISTING SEWER MAIN BE LOCATED DIRECTLY ON TOP OF THE PIPE, NOR SHALL IT MATCH THE FLOWLINE OF THE PIPE.

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION
1	TRACER WIRE	9/17		CARSON CITY
	APPROVED BY:	9/17		DRAWING NO. C-2.2.2 (203,306)
				DATE SEP 2017

SEWER SERVICE TAP SADDLE

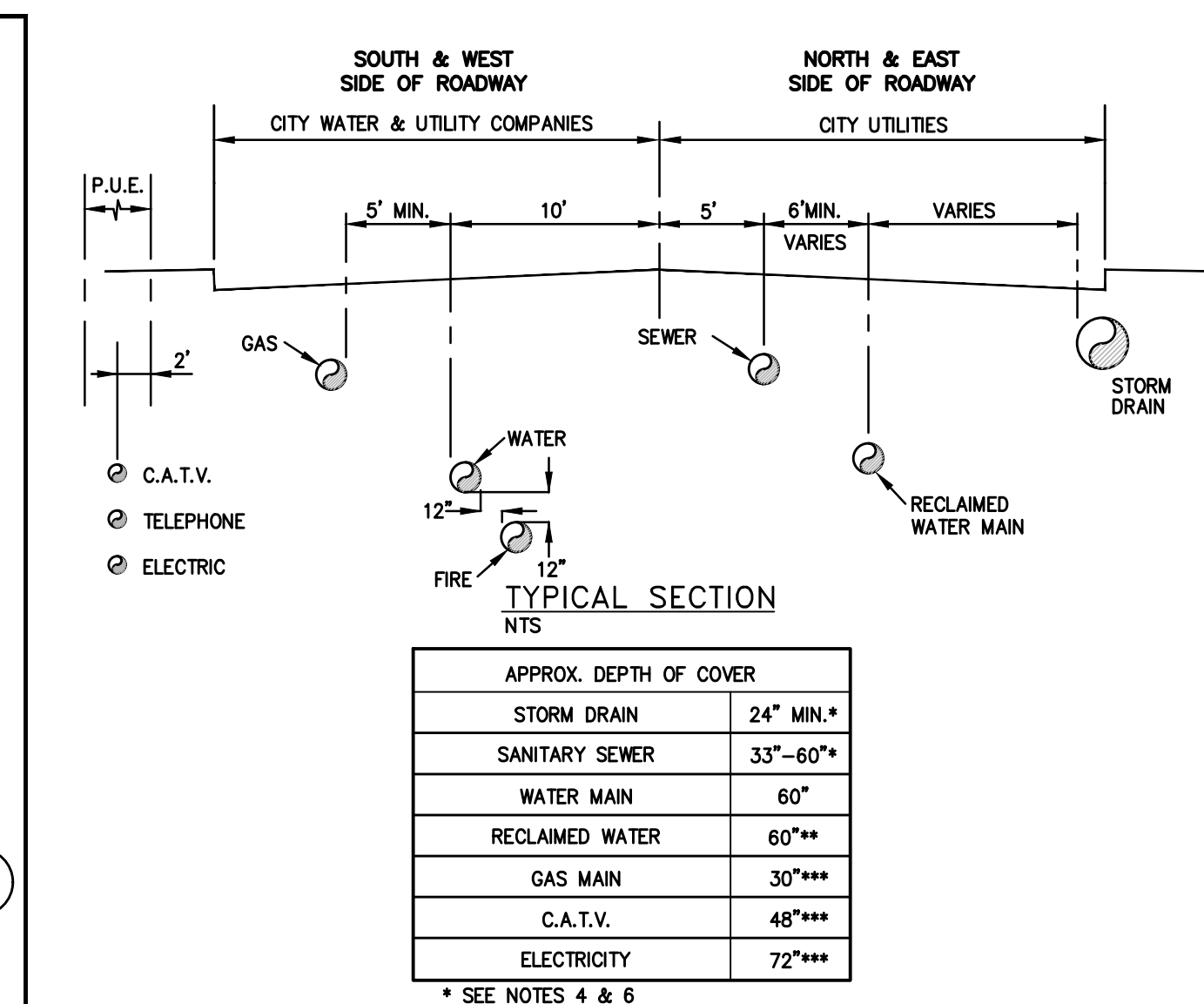


NOTES:

- WATER DENSIFIED BACKFILL AND TUNNELING SHALL BE BY SPECIAL PROVISION ONLY.
- BACKFILL SHALL CONFORM TO THE REQUIREMENTS OF CLASS E BACKFILL AS SPECIFIED IN SUBSECTION 200.03.06 OF THE SSPWC. MATERIAL SHALL BE PLACED IN LIFT THICKNESS SPECIFIED IN SUBSECTION 305.10 OF THE SSPWC AND DENSIFIED TO 90% RELATIVE COMPACTION PER ASTM D1557 MODIFIED PROCTOR.
- BEDDING SHALL CONFORM TO THE REQUIREMENTS OF CLASS A BACKFILL AS SPECIFIED IN SUBSECTION 200.03.02 OF THE SSPWC. MATERIAL SHALL BE DENSIFIED TO 90% RELATIVE COMPACTION PER ASTM D1557 MODIFIED PROCTOR.
- PLANS SHALL INCLUDE A DETAIL FOR SUBGRADE STABILIZATION INCLUDING BACKFILL MATERIAL, STRUCTURAL GEOTEXTILE FILTER FABRIC AND MODIFIED CUTOFF COLLARS WHEN POTENTIAL FOR UNSTABLE SUBGRADES EXIST. SUBJECT TO THE APPROVAL OF THE CARSON CITY ENGINEER OR PUBLIC WORKS DIRECTOR.
- FOR TRENCHES IN ROADWAY SECTION, SEE PAVEMENT PATCH DETAIL (DWG. No. C-5.1.6).
- FOR THE PURPOSE OF PAYMENT; EXCAVATION AND BACKFILL QUANTITIES ARE BASED ON THESE STANDARD DRAWINGS, AND NO ADDITIONAL COMPENSATION WILL BE MADE. SHORING OR SLOPED CUT SLOPES MAY BE NECESSARY, BUT THERE WILL BE NO ADDITIONAL PAYMENT. ALL EXCAVATIONS SHALL CONFORM TO THE LATEST O.S.H.A. REQUIREMENTS.
- PLACE WARNING TAPE 1 FOOT ABOVE ALL BURIED PIPES AND CONDUITS.
- TRACER WIRE SHALL BE 12 GAUGE (MINIMUM THICKNESS) INSULATED SOLID COPPER WIRE. INSULATION SHALL BE 30 MIL HDPE. PLANS SHALL SPECIFY WIRE STRENGTH AND INSULATION THICKNESS FOR BORING APPLICATIONS. SPLICES SHALL BE CONNECTED BY WIRE NUTS, SEALED WITH AQUA SEAL OR SILICON FILLED, AND DOUBLE WRAPPED WITH U/L LISTED ELECTRICAL TAPE. TRACER WIRE COLOR SHALL BE, BLUE FOR WATER, PURPLE FOR RECLAIMED WATER, GREEN FOR SEWER AND YELLOW FOR ELECTRICAL OR FIBER OPTIC.

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION
1	NOTE 8	9/17		CARSON CITY
2	NOTE 2 & 3	12/19		DRAWING NO. C-1.2.1 (305)
	APPROVED BY:	12/19		DATE DEC 2019

TRENCH EXCAVATION AND BACKFILL



NOTES:

- FOR COMMON TRENCH SECTION, SEE DETAIL, DWG. C-1.2.1. COMMON TRENCH WITH OTHER UTILITIES IS NOT ALLOWED FOR WATER, SEWER OR RECLAIMED WATER.
- P.U.E. INDICATES PUBLIC UTILITY EASEMENT.
- DEPTHS OF COVER AND LOCATION OTHER THAN THOSE PROVIDED HEREIN ARE SUBJECT TO CARSON CITY DEVELOPMENT ENGINEERING & PUBLIC WORKS APPROVAL.
- DEPTH SHALL BE AS REQUIRED TO PROVIDE ADEQUATE CLEARANCE FROM OTHER UTILITIES AND TO SERVE UPSTREAM TRIBUTARY AREAS, AND TO MEET PROPER DESIGN REQUIREMENTS FOR DOWNSTREAM CONNECTIONS.
- RECLAIMED WATER PIPE SHALL BE PURPLE IN COLOR. DEPTH MAY BE LESS THAN 60 INCHES IN LOCATIONS WHERE WATER MAINS ARE NEVER EXPECTED TO OCCUR.
- LOCATION AND DEPTH SHALL BE AS REQUIRED TO MEET THE REQUIREMENTS OF NAC CHAPTER 445A AND THE NDEP BUREAU OF SAFE DRINKING WATER VERTICAL CROSSING CONFLICTS SUMMARY.

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION
1				CARSON CITY
	APPROVED BY:			DRAWING NO. C-1.2.1 (305)
				DATE DEC 2019

TYPICAL UTILITY LOCATION

LUMOS & ASSOCIATES
ENGINEER
308 N. CURRY ST., STE. 200
CARSON CITY, NEVADA 89706
TEL: 775.883.7077

LITTLE LANE APARTMENTS
CARSON CITY, NEVADA
CLARK RSF ENTERPRISES, LLC
3377 CARMEL MOUNTAIN ROAD
SAN DIEGO, CA 92121

project number 9801.001
date 3/16/2021
revisions
3-15-2021 revised arch layout

STAMP
SHEET TITLE
DETAILS
sheet number

C7.1

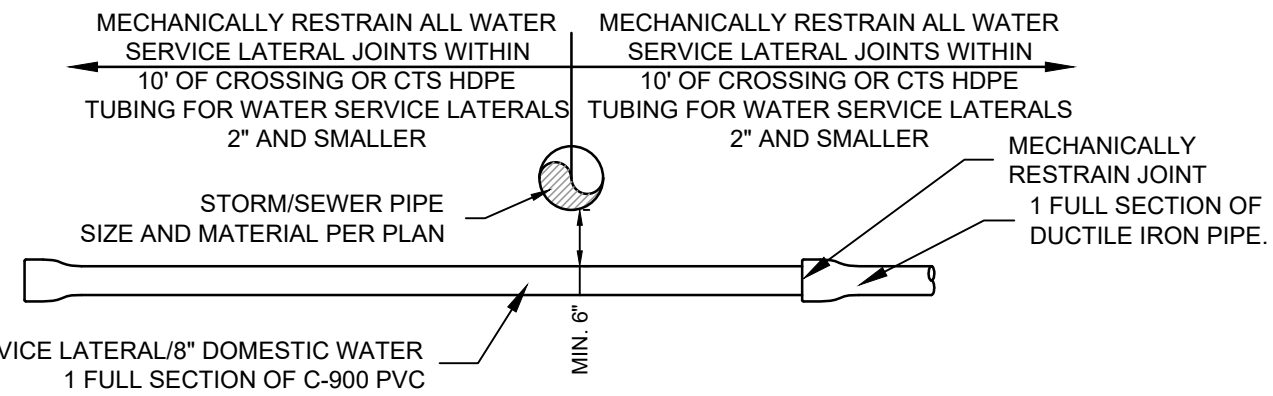
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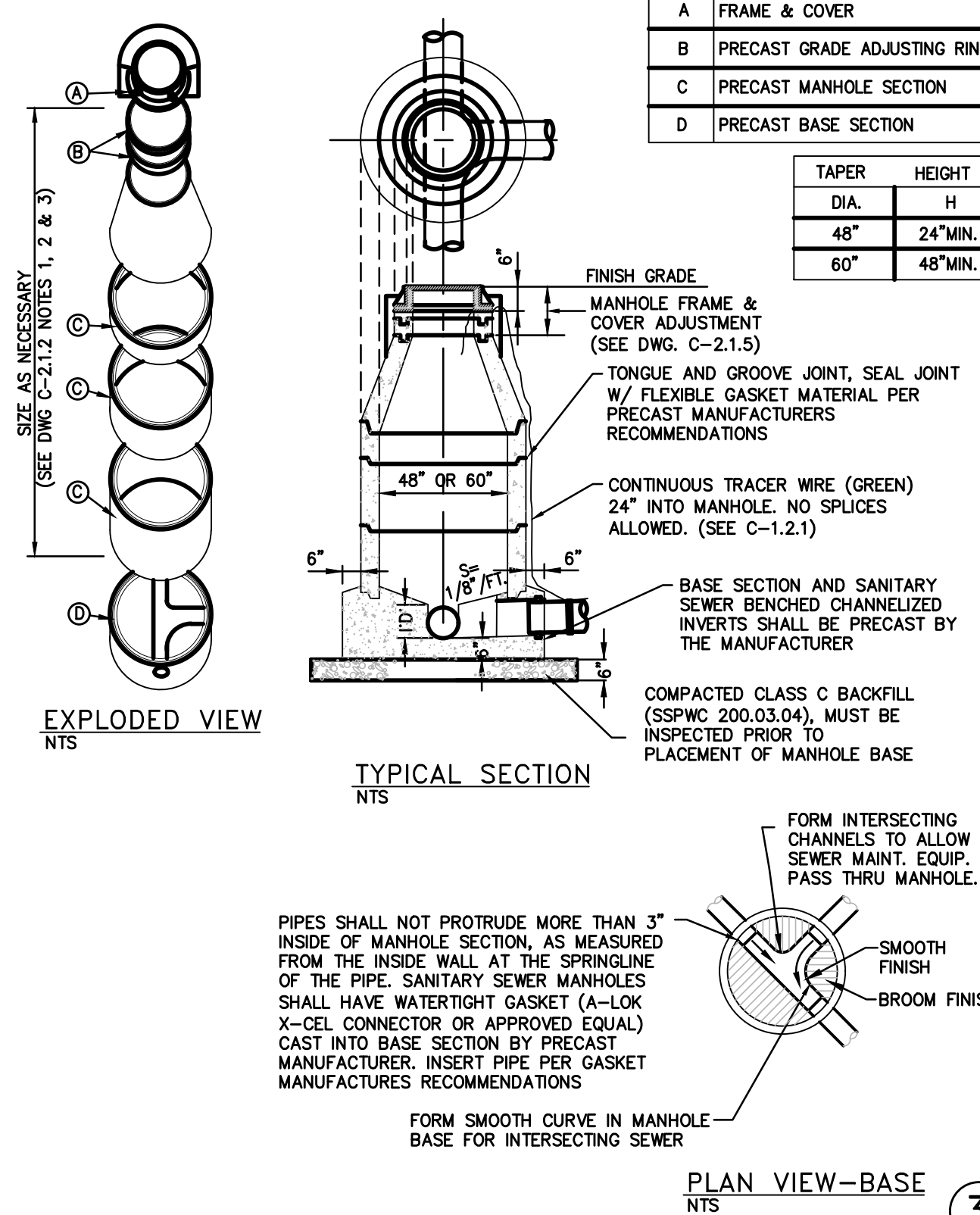
WATER SERVICE CROSSING STORM/SEWER

N.T.S.

1

- MANHOLE BASE(S) SHALL BE PRECAST UNLESS OTHERWISE APPROVED BY CARSON CITY PUBLIC WORKS. NO FIELD MODIFICATIONS TO PRECAST BASES WILL BE ALLOWED. TROUGHS AND BENCHES TO BE CAST IN BASE(S) AT PRECAST FACTORY. BASE CONFIGURATION TO BE INSTALLED AS SHOWN ON THE APPROVED PLANS. NO PLUGGING OR FIELD MODIFYING ALLOWED.
- PRECAST MANHOLE COMPONENTS SHALL CONFORM TO ASTM C-478.
- ARRANGE MANHOLE SECTION LENGTHS TO FIT DEPTH. ALL SHIMS TO BE REMOVED AND VOIDS GROUTED.
- PIPES SHALL NOT PROTRUDE MORE THAN 3 INCHES INSIDE MANHOLE SECTION, AS MEASURED FROM THE INSIDE WALL AT THE SPRING LINE OF THE PIPE.
- MANHOLE MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF SECTION 204 "MANHOLES AND CATCH BASINS" OF THE STANDARD SPECIFICATIONS.
- PRECAST MANHOLE SECTIONS, OTHER THAN GRADE RINGS, SHALL BE JOINED WITH FLEXIBLE PLASTIC GASKET MATERIAL SUCH AS "RAM-NEK" OR EQUAL AS PER MANUFACTURER'S RECOMMENDATIONS.
- EXCAVATION AND BACKFILL SHALL BE AS SPECIFIED FOR "TRENCH EXCAVATION AND BACKFILL" IN SECTION 305 OF THE STANDARD SPECIFICATIONS. (SEE C-1.2.1)
- NO SEWER LINE PIPE WITH A DIAMETER OF LESS THAN 8 INCHES SHALL BE CONNECTED TO A MANHOLE WITHOUT THE APPROVAL OF THE CITY ENGINEER OR PUBLIC WORKS DIRECTOR.
- MATCH PIPE INVERTS TO MANHOLE INVERTS WHERE PIPES CONNECT TO MANHOLE BASE.
- ALL MANHOLES SHALL BE SEALED WATERTIGHT. COVERS SHALL HAVE NO "THRU" HOLES. CLOSED PICK HOLES ONLY. SOUTH BAY FOUNDRY 1900 CPH OR APPROVED EQUAL.
- COAT OUTSIDE OF SEWER MANHOLE WITH FLEXIBLE RUBBERIZED COATING WHEN GROUNDWATER IS ENCOUNTERED.
- PRIOR TO BACKFILLING, ALL MANHOLES SHALL BE VACUUM TESTED PER THE REQUIREMENTS OF ASTM C-1244.
- MANHOLE VACUUM TESTING SHALL REQUIRE THAT A VACUUM OF 10 INCHES OF MERCURY SHALL BE DRAWN AND THE VACUUM PUMP SHUT OFF. WITH THE VALVES CLOSED, THE TIME SHALL BE MEASURED FOR THE VACUUM TO DROP TO 9 INCHES. THE MANHOLE SHALL PASS IF THE TIME IS GREATER THAN 60 SECONDS FOR 48" DIAMETER, 75 SECONDS FOR 60" DIAMETER AND 90 SECONDS FOR 72" DIAMETER MANHOLES.
- NO STEPS, LADDERS OR OTHER CLIMBING DEVICES SHALL BE INSTALLED IN MANHOLES.
- MANHOLES LOCATED OUTSIDE PAVED AREAS SHALL REQUIRE ALL WEATHER ACCESS ROADWAY CONSISTING OF 6 INCH TYPE 2, CLASS B AGGREGATE BASE (CONFORMING TO THE SSPWC SECTION 200.01.02) AND SEWER MANHOLE MARKERS SHALL BE INSTALLED. SEWER MANHOLE MARKERS SHALL BE GREEN CARSONITE UTILITY MARKER (CUM 375), 5 FEET-2 INCHES (5'-2") WITH MANHOLE DECAL (668-MH) OR APPROVED EQUAL. PLACE MARKERS ON EASEMENT LINE NEAREST TO MANHOLE OR AS DIRECTED BY THE CARSON CITY ENGINEER OR PUBLIC WORKS DIRECTOR.
- WHEN PIPE CONNECTIONS TO EXISTING MANHOLES ARE ALLOWED, THEY SHALL BE MADE BY CORE DRILLING THE MANHOLE AND CONNECTING THE PIPE PENETRATION WITH AN NPC KOR-N-SEAL PIPE-TO-MANHOLE CONNECTOR OR A LINK-SEAL MODULAR SEAL.

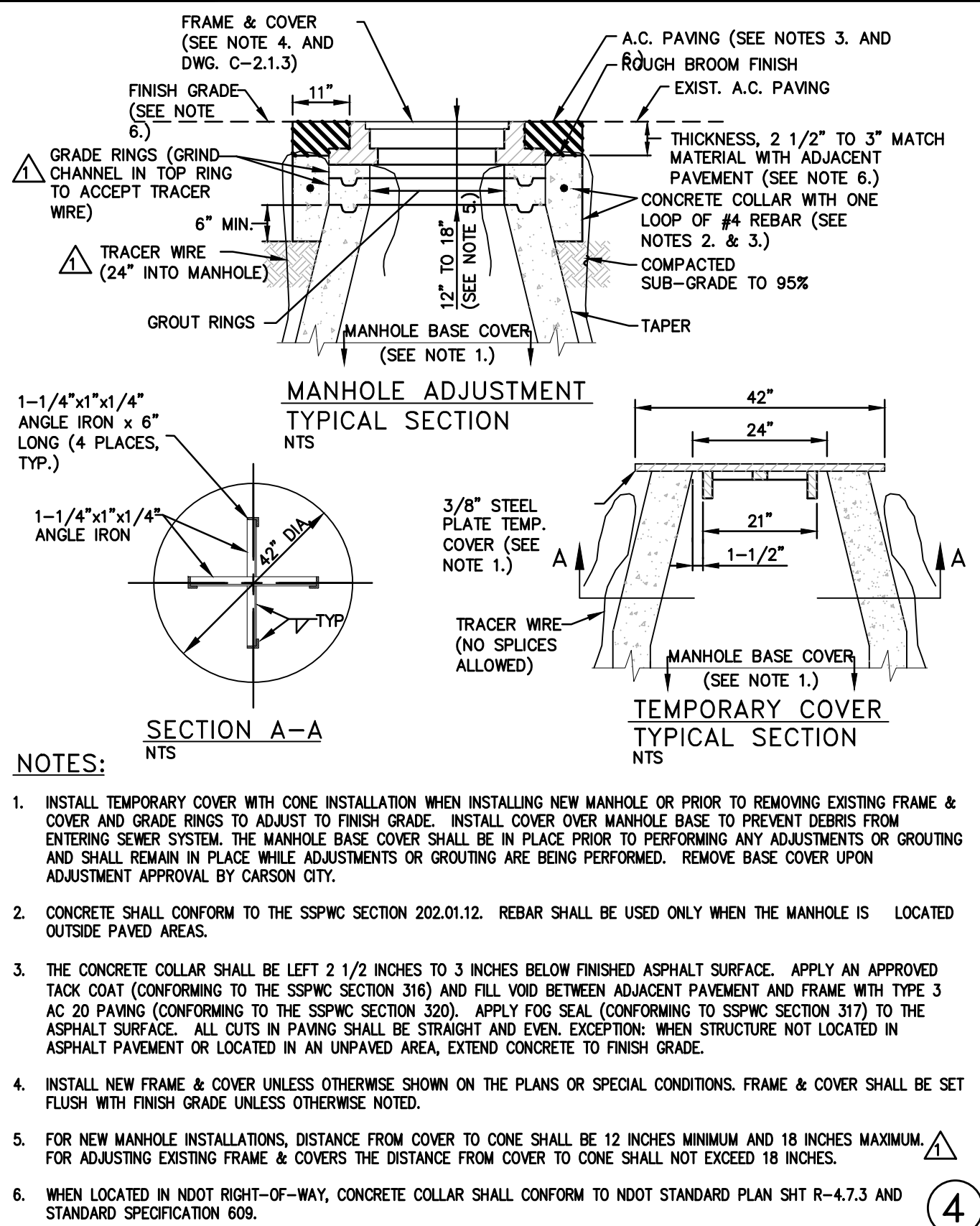
NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION
1	NOTE 13&16	9/17	SEWER MANHOLE NOTES	CARSON CITY
			DRAWING NO. C-2.1.2 (204,306,323)	
			DATE SEP 2017	



2

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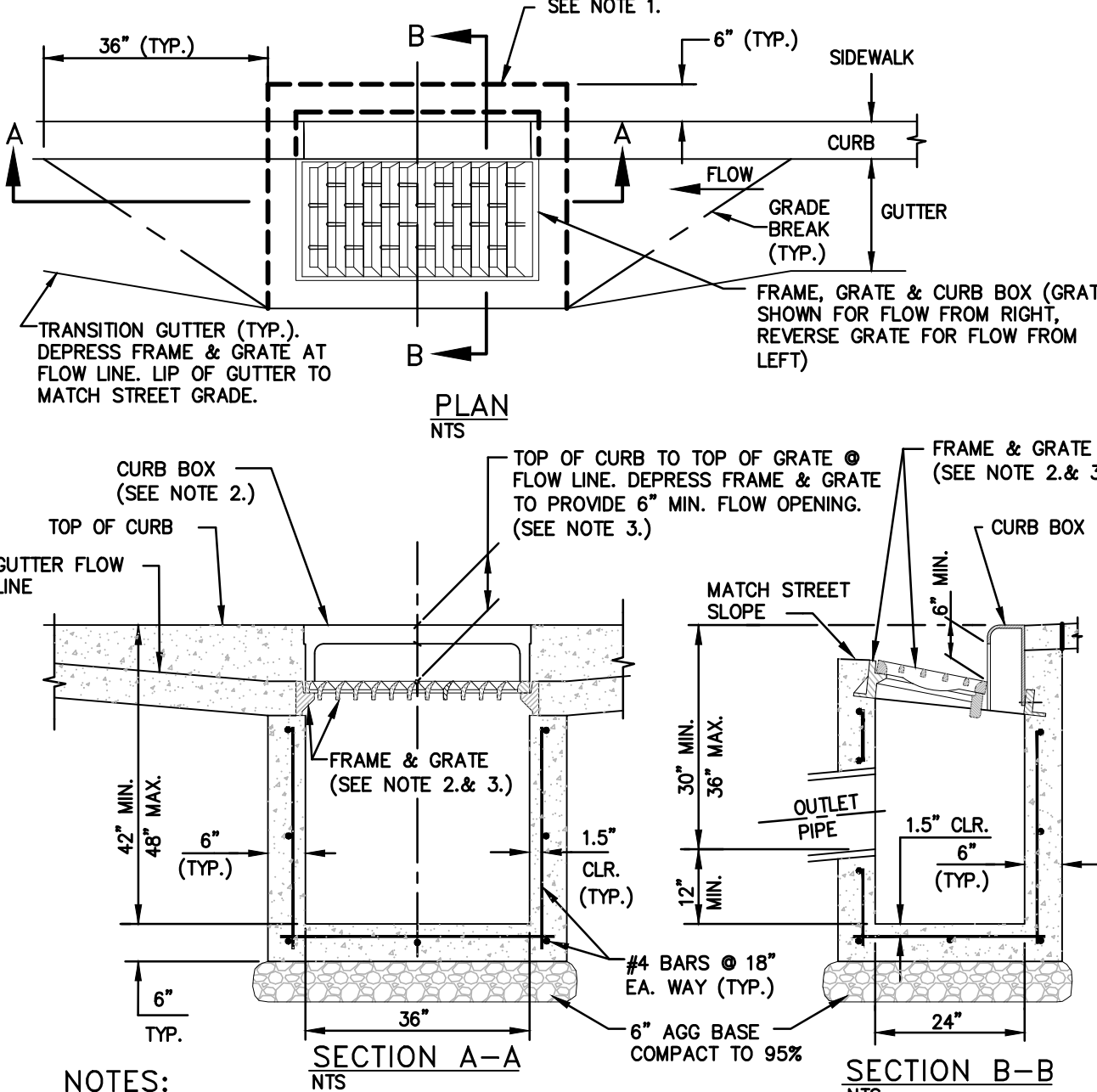
NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION
1	CONE DEPTH	9/17	MANHOLE TYPE 1	CARSON CITY
			DRAWING NO. C-2.1.3 (204, 306)	
			DATE SEP 2017	



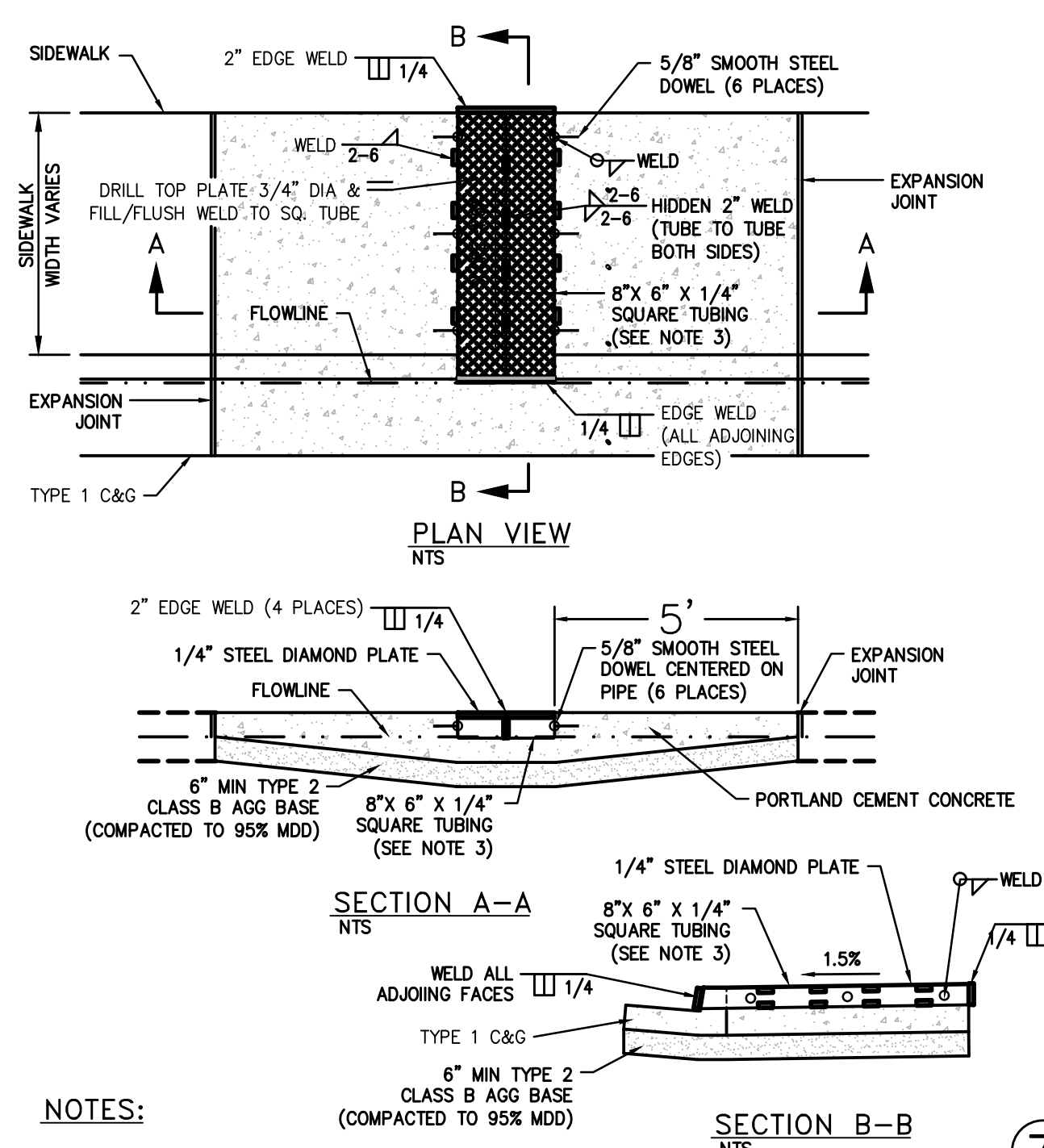
NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION
1	CONE DEPTH	9/17	MANHOLE FRAME & COVER ADJUSTMENT	CARSON CITY
			DRAWING NO. C-2.1.5 (204, 323)	
			DATE SEP 2017	

- MANHOLE AND CATCH BASIN MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF SECTION 204 "MANHOLES AND CATCH BASINS" OF THE SSPWC.
- MARKING TAPE SHALL BE INSTALLED 12 INCHES ABOVE ALL STORM DRAIN PIPE. TAPE WIDTH SHALL BE 3 INCHES; THICKNESS SHALL BE FOUR (4) MIL OR GREATER AND SHALL BE GREEN AND BEAR LARGE PRINTING DENOTING "CAUTION BURIED STORM DRAIN LINE BELOW" OR EQUIVALENT WORDING.
- PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSIVE STRENGTH @ 28 DAYS, (CURB AND GUTTER TRANSITION ONLY, ALL UNEXPOSED CONCRETE MAY BE 3000 PSI) MIN. 6 SACKS OF CEMENT PER CUBIC YARD WITH A MAX. WATER/CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6% ±1.5% SLUMP AT 1 TO 4 INCHES. ALL MATERIALS SHALL CONFORM TO SSPWC SECTION 202.
- REINFORCING STEEL SHALL BE GRADE 40 AND HAVE 1.5 INCHES MINIMUM CLEAR COVER.
- EACH CATCH BASIN SHALL HAVE A 4 INCH ALUMINUM BLUE DISK WITH FISH IMAGE AND THE WORDS "NO DUMPING! DRAINS TO RIVER" (ALMETEK SD-4 OR APPROVED EQUAL) INSTALLED ON THE TOP OF THE CURB BOX.
- FRAMES AND GRATES SHALL BE MATCHED TO ACHIEVE A CLOSE TOLERANCE FIT, WITH MINIMAL GAPS, AS APPROVED BY THE CARSON CITY ENGINEER OR PUBLIC WORKS DIRECTOR.
- STORM DRAINAGE IMPROVEMENTS SHALL INCORPORATE WATER QUALITY AND EROSION CONTROLS IN ACCORDANCE WITH CARSON CITY DEVELOPMENT STANDARDS-DIVISION 13, "EROSION & SEDIMENT CONTROL".
- PRECAST MANHOLES SECTIONS, OTHER THAN GRADE RINGS, SHALL BE JOINED WITH FLEXIBLE PLASTIC GASKET MATERIAL SUCH AS RAM-NEK OR APPROVED EQUAL PER MANUFACTURER'S RECOMMENDATIONS.
- TRACER WIRE SHALL BE ATTACHED TO ANY STORM DRAIN LATERAL WHICH IS NOT PERPENDICULAR TO THE STORM DRAIN MAIN.
- MANHOLES LOCATED OUTSIDE PAVED AREAS SHALL REQUIRE ALL WEATHER ACCESS ROADWAY CONSISTING OF 6 INCHES TYPE 2, CLASS B AGGREGATE BASE (CONFORMING TO THE SSPWC SECTION 200.01.02) AND STORM DRAIN MANHOLE MARKERS BE INSTALLED. STORM DRAIN MANHOLE MARKERS SHALL BE GREEN CARSONITE UTILITY MARKER (CUM 375), 5 FEET-2 INCHES (5'-2") WITH DECAL READING "STORM DRAIN MANHOLE". PLACE MARKERS ON EASEMENT LINE NEAREST TO MANHOLE OR AS DIRECTED BY THE CARSON CITY ENGINEER OR PUBLIC WORKS DIRECTOR.
- MANHOLE CONCRETE COLLARS SHALL BE LEFT 2 1/2 INCHES TO 3 INCHES BELOW FINISHED ASPHALT SURFACE. APPLY AN APPROVED TACK COAT (CONFORMING TO THE SSPWC SECTION 316) AND FILL VOID BETWEEN ADJACENT PAVEMENT AND FRAME WITH TYPE 3 AC 20 PAVING (CONFORMING TO THE SSPWC SECTION 320). APPLY FOG SEAL (CONFORMING TO SSPWC SECTION 317) TO THE ASPHALT SURFACE. ALL CUTS IN PAVING SHALL BE STRAIGHT AND EVEN. EXCEPTION: WHEN STRUCTURE NOT LOCATED IN ASPHALT PAVEMENT OR LOCATED IN AN UNPAVED AREA, EXTEND CONCRETE TO FINISH GRADE.
- GRATES SHALL BE PLACED OUTSIDE OF THE PEDESTRIAN TRAVELED WAY. GRATE OPENINGS SHALL NOT EXCEED 0.5 INCHES IN WIDTH OR 4 INCHES IN LENGTH. GRATES SHALL BE TRAFFIC RATED AND ADA COMPLIANT.

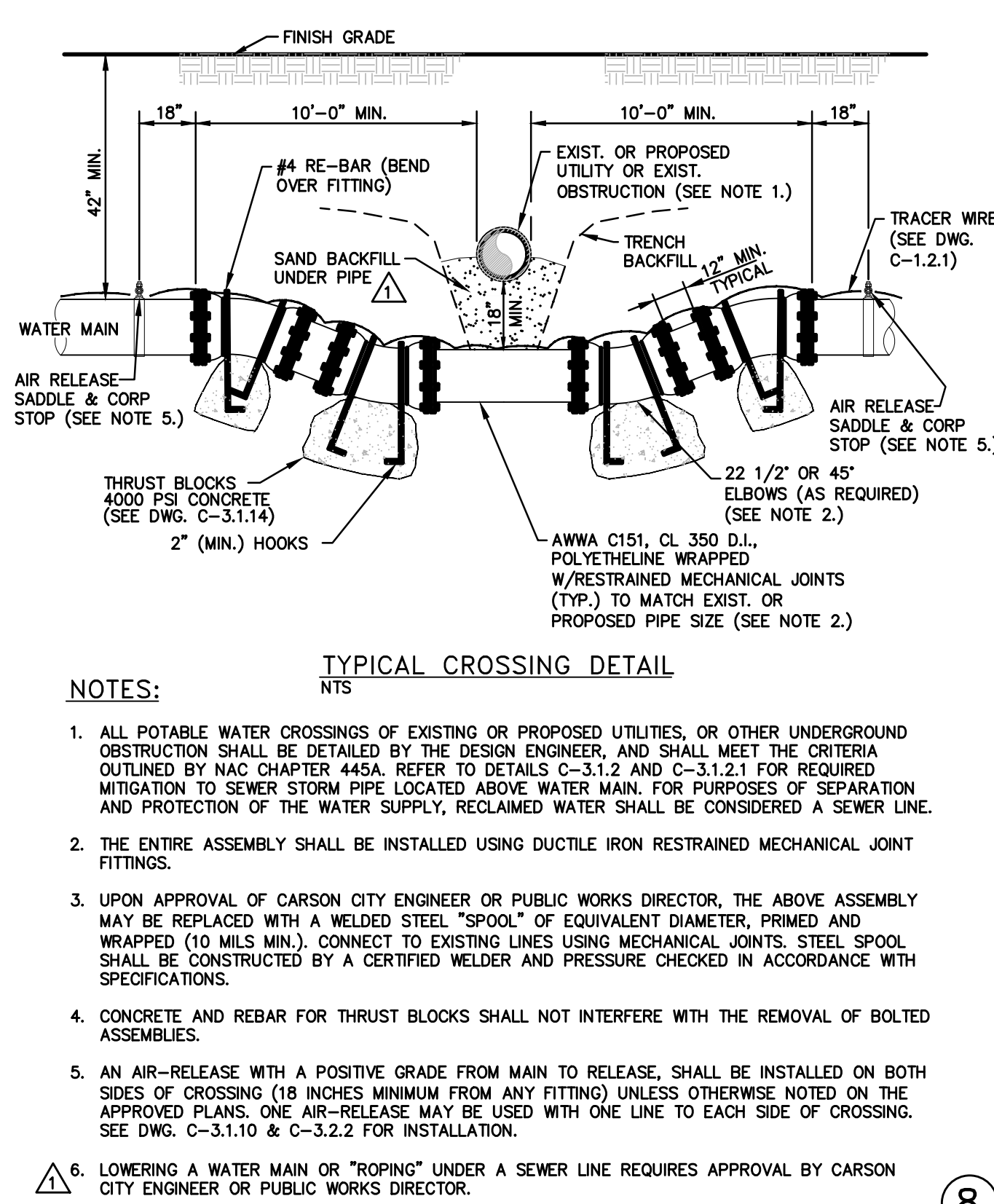
NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION
1	NOTE 7	9/17	STORM DRAIN GENERAL NOTES	CARSON CITY
			DRAWING NO. C-4.1.1	
			DATE SEP 2017	



NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION
			CATCH BASIN TYPE 4-R	CARSON CITY
			DRAWING NO. C-4.1.5	
			DATE SEP 2017	



NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION
1	REDESIGN	9/17	SIDEWALK CROSS-DRAIN	CARSON CITY
			DRAWING NO. C-4.1.8	
			DATE SEP 2017	



NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION
1	BACKFILL	9/17	LOWERING WATER MAINS	CARSON CITY
			DRAWING NO. C-3.1.8 (203,307)	
			DATE SEP 2017	

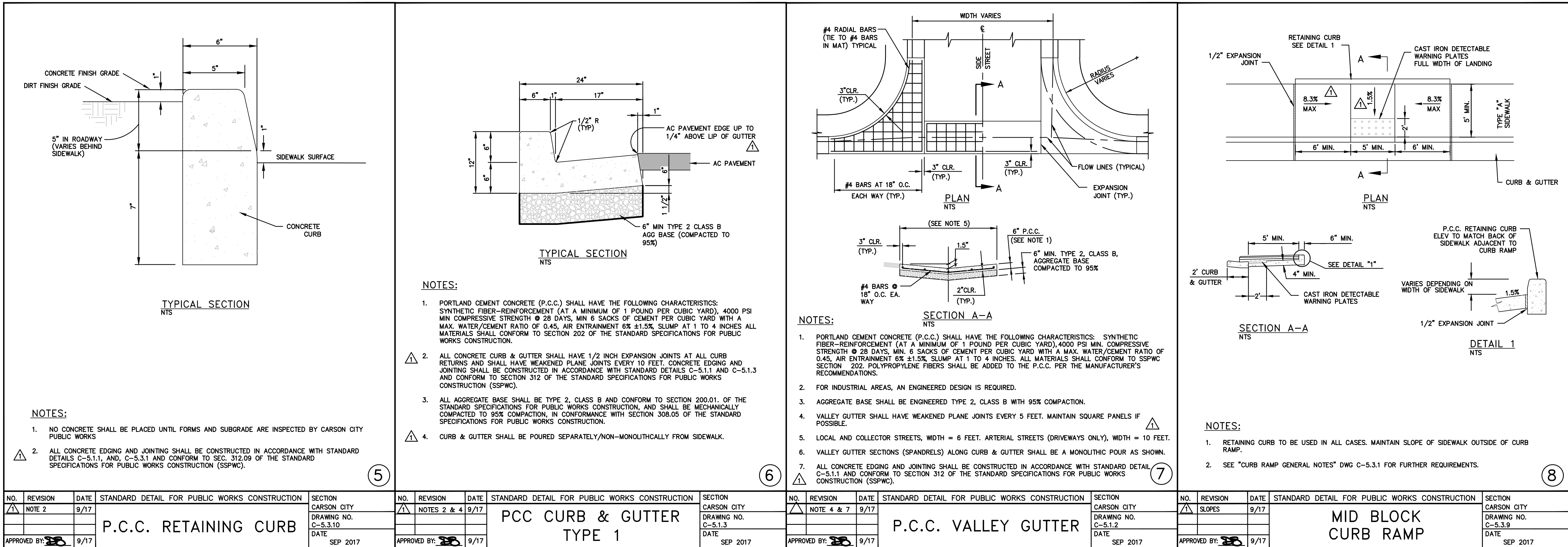
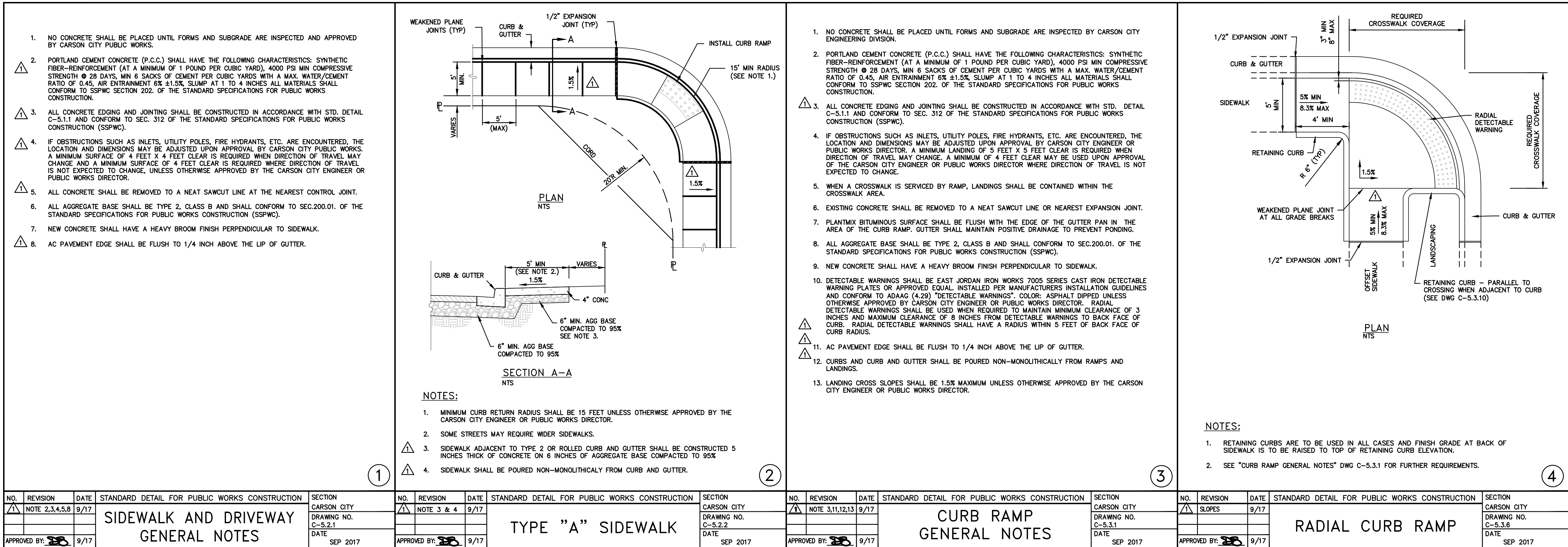
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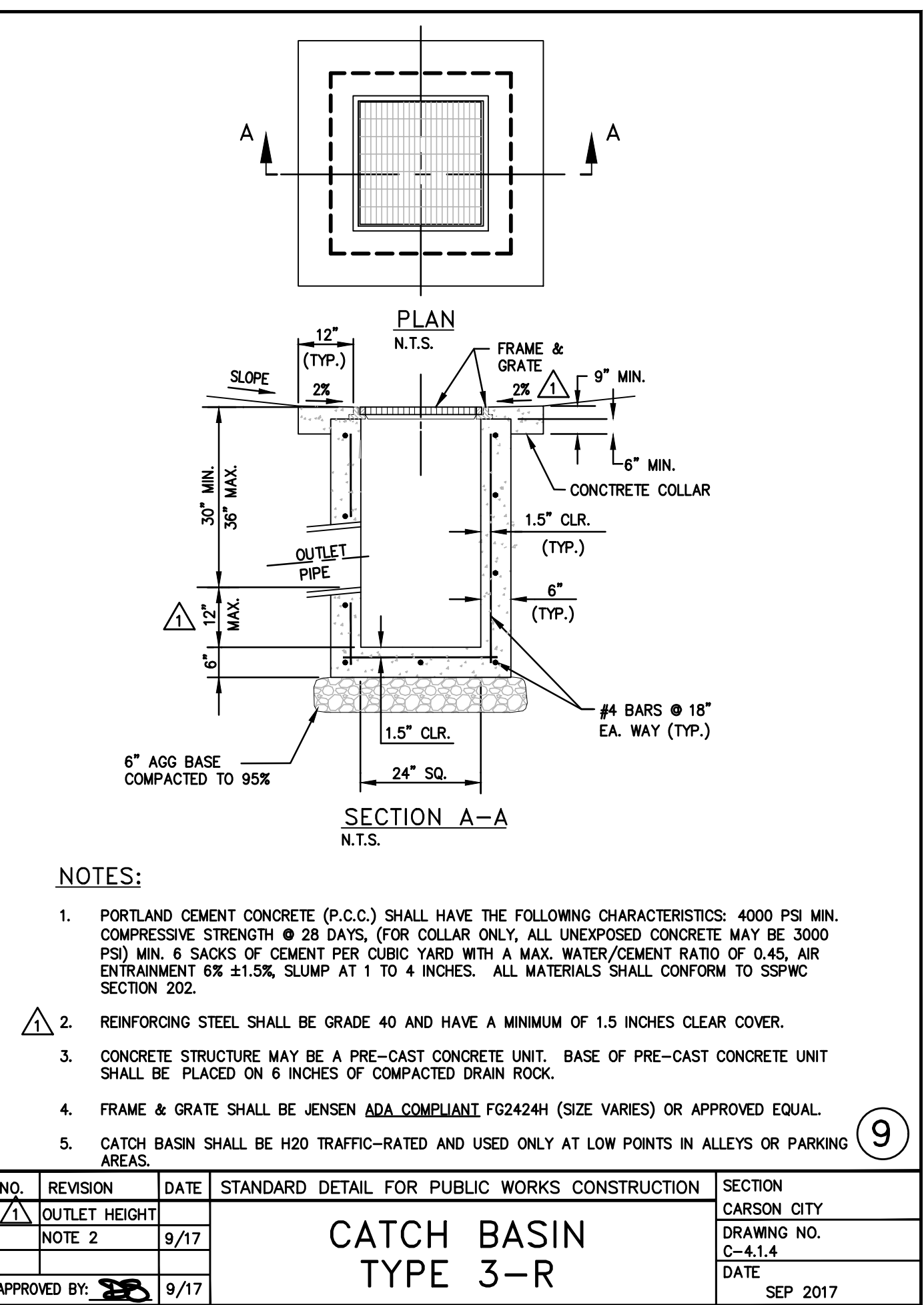
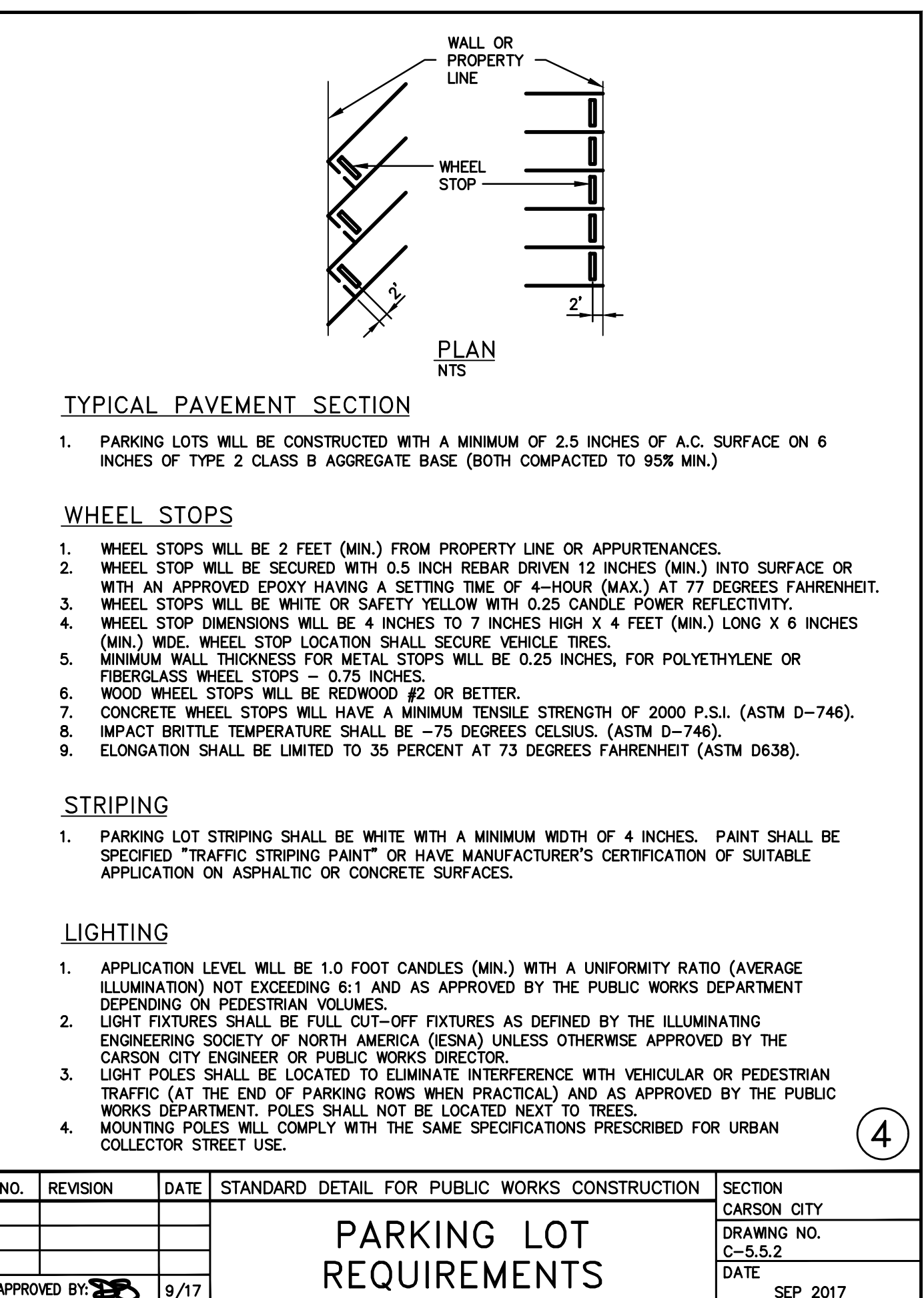
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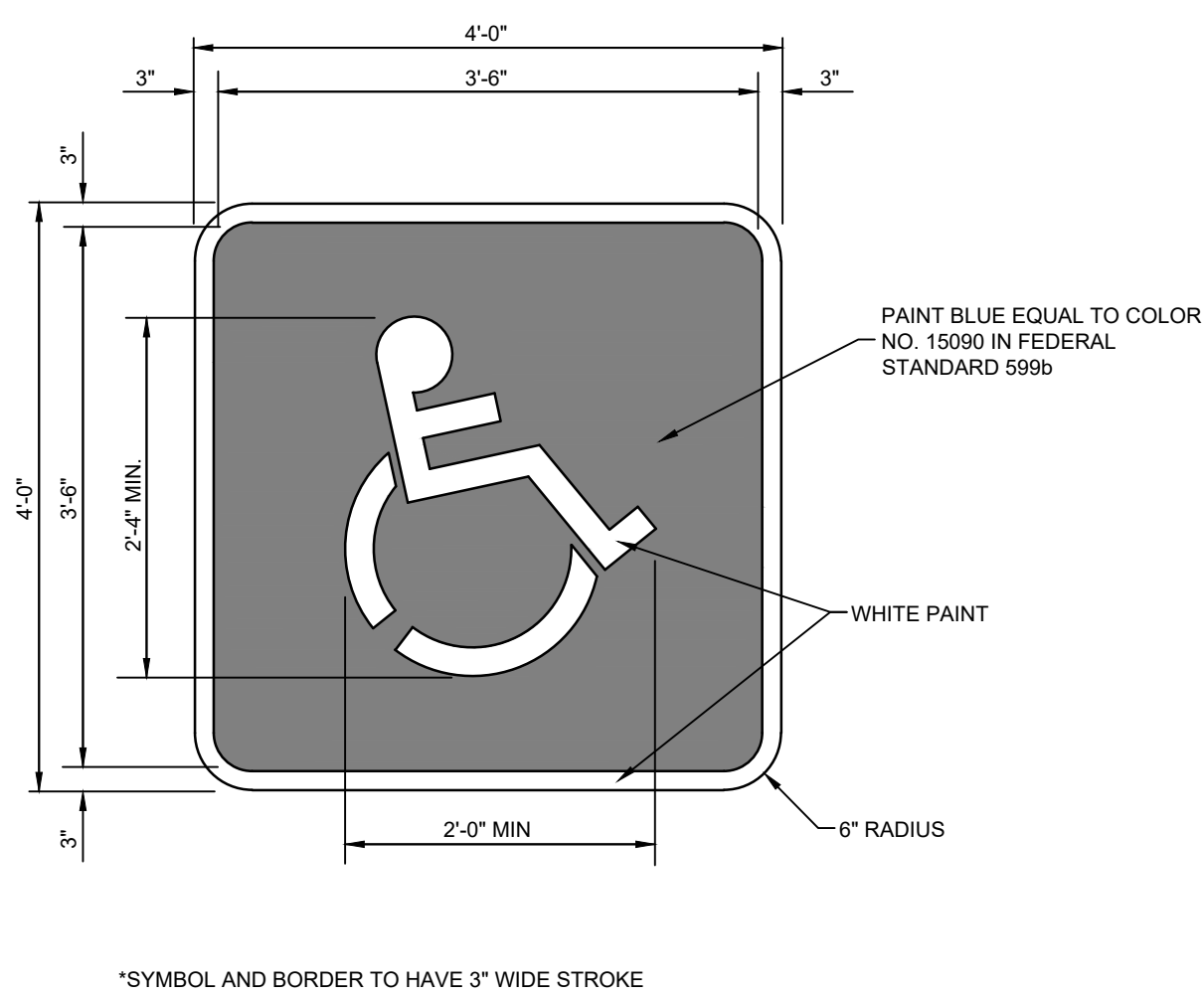
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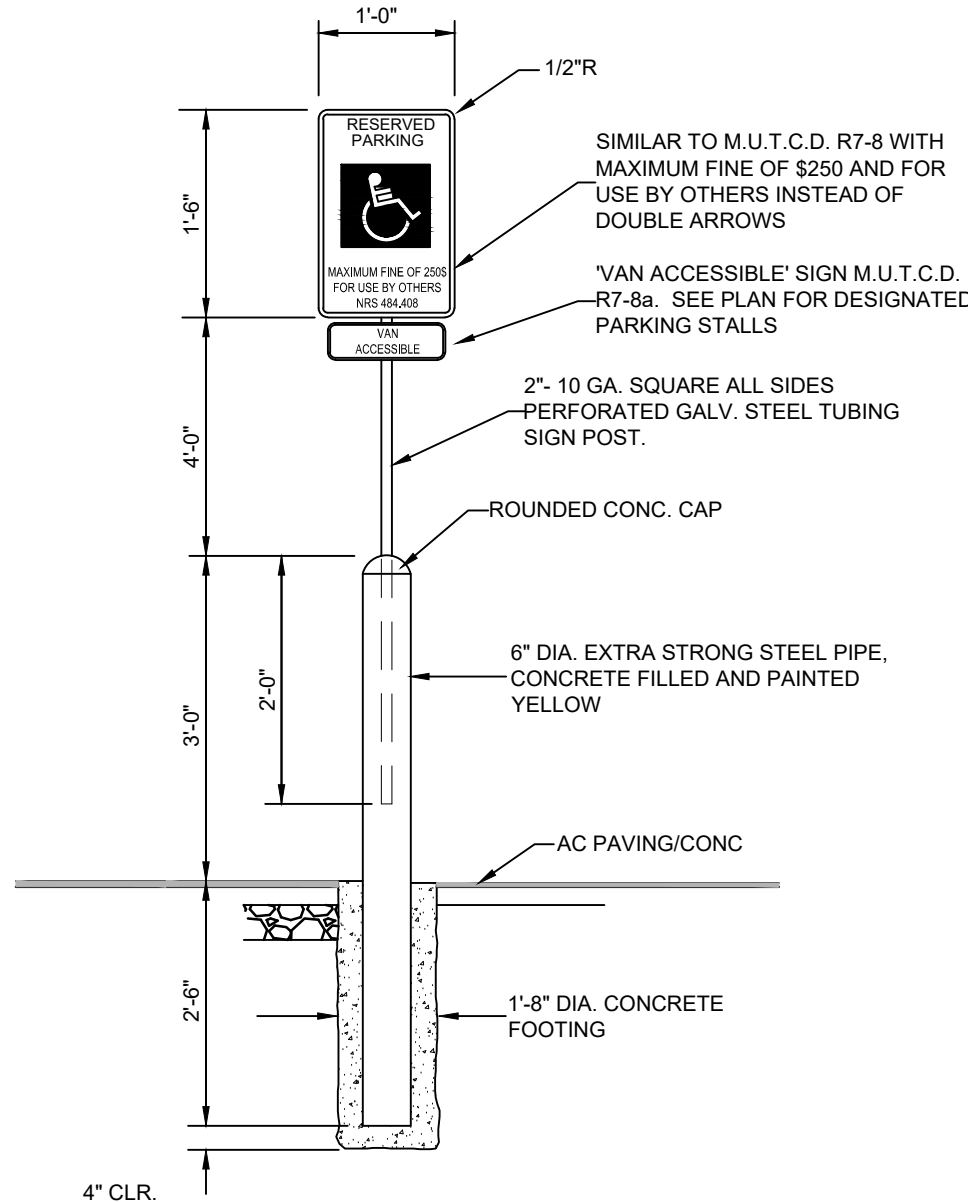
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HANDICAPPED SYMBOL

N.T.S.

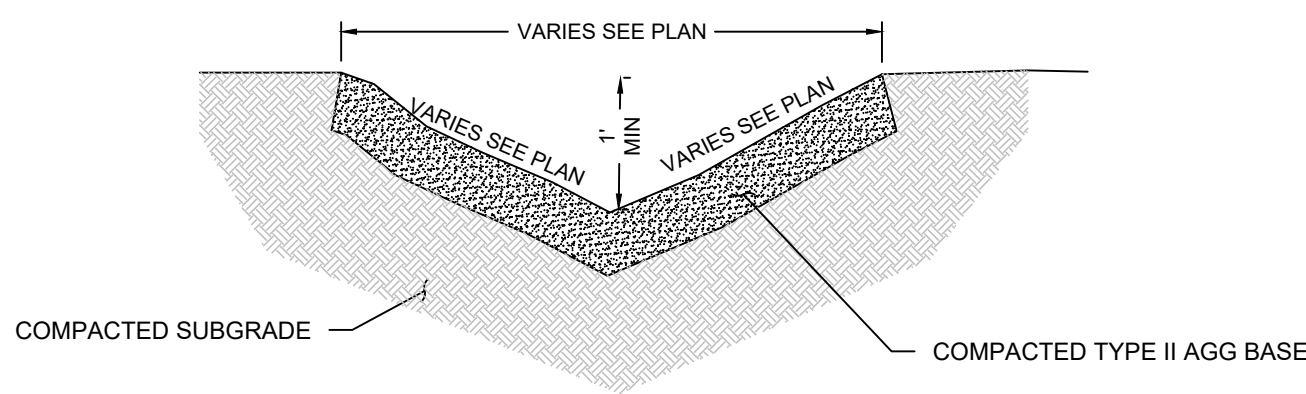
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BOLLARD WITH HANDICAPPED SIGN

N.T.S.

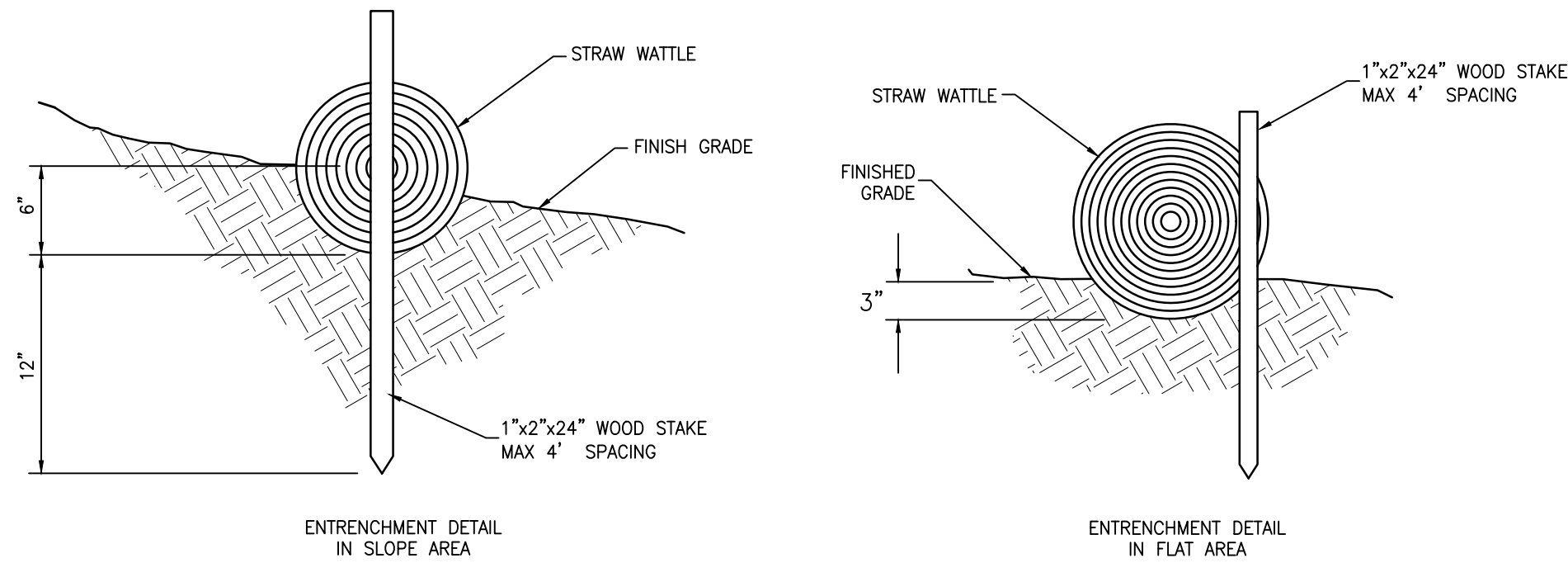
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V-DITCH

N.T.S.

12



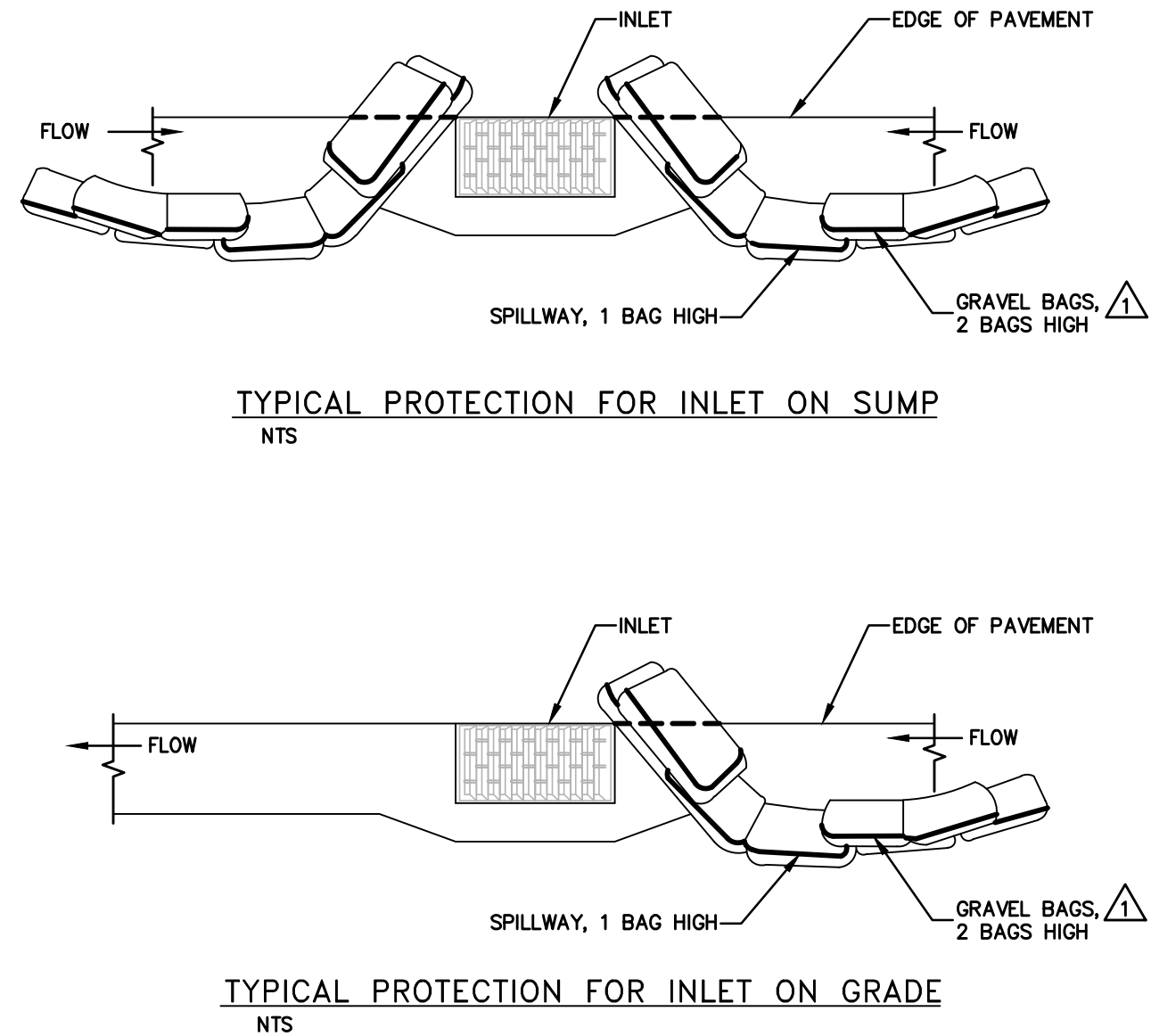
NOTES:

1. SEDIMENT ROLLS MAY BE FIBER ROLL LOGS OR RICE STRAW WATTLES. THEY SHALL BE A MINIMUM OF 16" IN DIAMETER WHEN PLACED ON SOIL. SEDIMENT ROLLS PLACED ON AC PAVING SHALL BE WEIGHTED AND SHALL BE A MINIMUM OF 8" IN DIAMETER.
2. ROLLS SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS, THESE DETAILS AND THE SPECIAL PROVISIONS.
3. WHEN MORE THAN ONE FIBER ROLL IS PLACED IN A ROW, THE ROLLS SHALL BE TIGHTLY ABUTTED AND STAKED, NOT OVERLAPPED.

STRAW WATTLE

N.T.S.

4



NOTES:

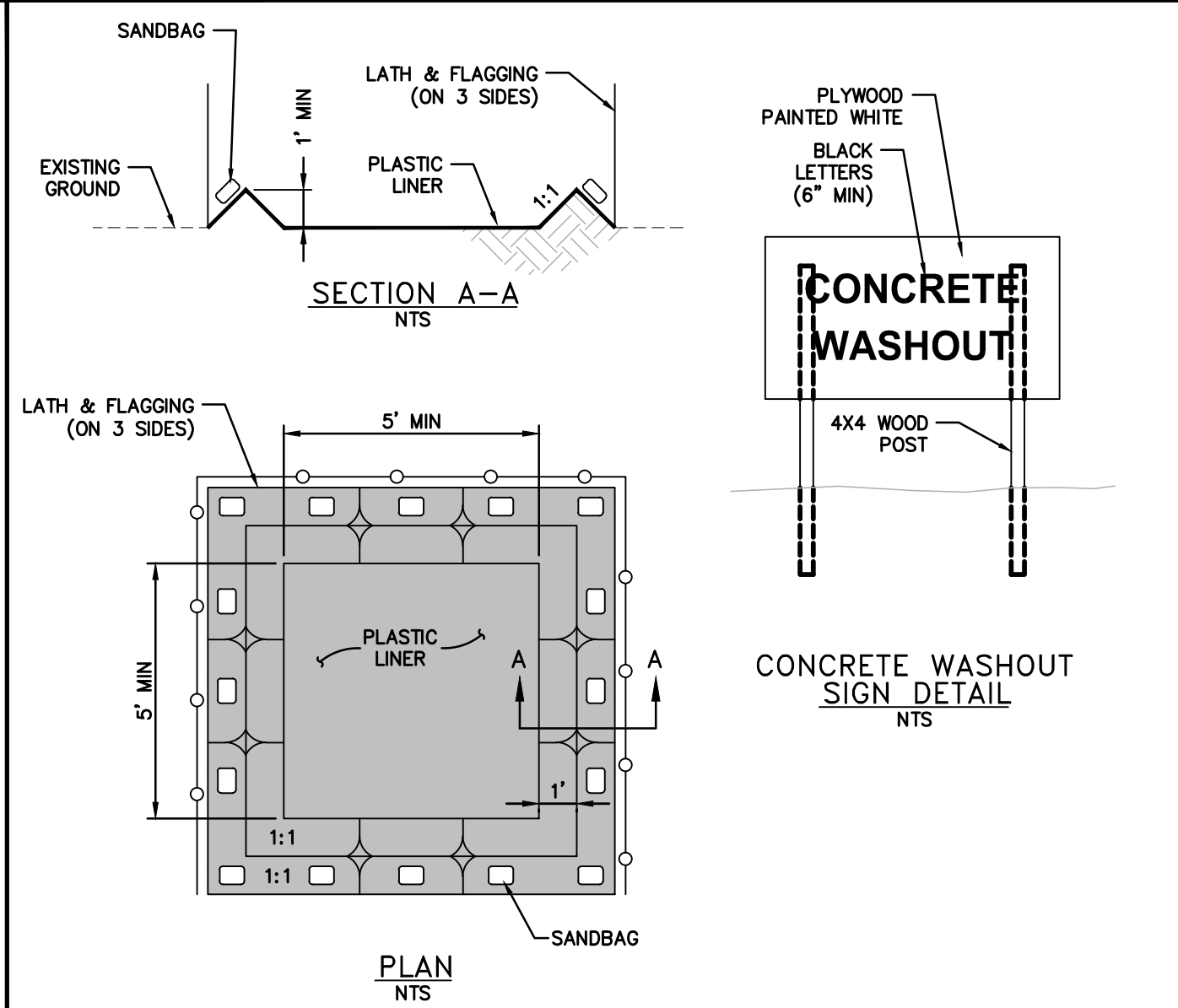
1. INTENDED FOR TEMPORARY SHORT-TERM USE.
2. USE TO MANAGE CURB WATER FLOW.
3. SEDIMENT CAPTURED BEHIND GRAVEL BAGS SHALL BE REMOVED WEEKLY DURING CONSTRUCTION.
4. INLET PROTECTION MUST BE PROPERLY MAINTAINED WHILE IN PLACE AND REMOVED WHEN REQUIREMENTS OF NDEP PERMIT HAVE BEEN MET.
5. GRAVEL BAGS SHALL BE FILLED WITH 3/8" - 3/4" WASHED ROCK.

2

1

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION
1	GRAVEL BAG	05/14		CARSON CITY
2	ROCK SIZE	9/17		DRAWING NO. C-4.1.7
				DATE SEP 2017
APPROVED BY:		9/17		

STORM DRAIN INLET PROTECTION



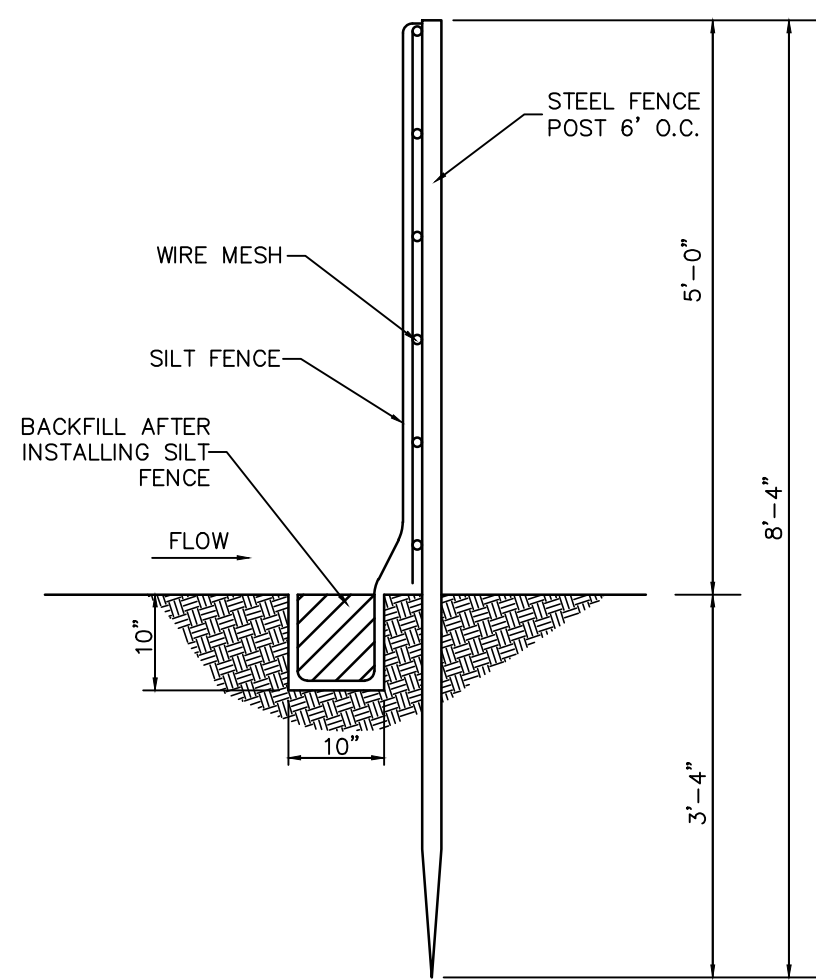
NOTES:

1. WHERE POSSIBLE, CONCRETE SUPPLIERS SHALL CONDUCT WASHOUT ACTIVITIES AT THEIR OWN PLANTS OR DISPATCH FACILITIES.
2. AN EFFECTIVE MEANS OF ELIMINATING THE DISCHARGE OF WATER FROM THE WASHOUT CONCRETE SHALL BE PROVIDED.
3. CONCRETE WASHOUT FACILITIES SHALL NOT BE USED FOR THE DISPOSAL OF EXCESS CONCRETE AND CEMENT. TRUCKS SHALL NOT BE ALLOWED TO BACK TURN AND DISPOSE OF RESIDUAL LOADS.
4. LOCATE WASHOUT AREAS A MINIMUM OF 50 FEET FROM WATER WAYS AND STORM DRAIN SYSTEM INLETS.
5. WHEN THE WASHOUT IS 75 PERCENT FULL, IT MUST BE CLEANED OR A NEW WASHOUT MUST BE CONSTRUCTED. DISPOSE OF WASTE AT LEAST ONCE A WEEK.
6. A CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 15 FEET OF THE TEMPORARY CONCRETE WASHOUT BASIN.

2

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION
				CARSON CITY
				DRAWING NO. C-1.2.6
				DATE SEP 2017
APPROVED BY:		9/17		

CONCRETE WASHOUT BASIN



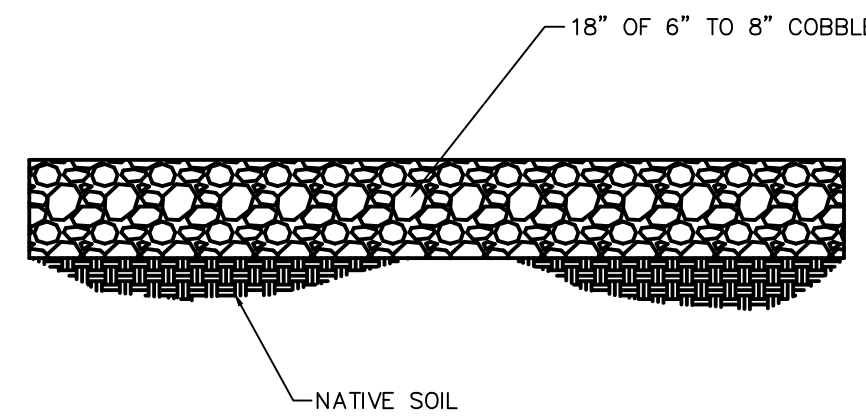
NOTE:

1. THE CONTRACTOR MAY USE MANUFACTURED SILT FENCING IN LIEU OF THE ABOVE, SUBJECT TO SUBMITTAL OF THE MANUFACTURE'S DATA SHEETS TO THE ENGINEER FOR APPROVAL.

EROSION CONTROL SILT FENCE

N.T.S.

5



KNOCK DOWN/WASH DOWN PAD

N.T.S.

6

STAMP

SHEET TITLE

DETAILS

sheet number

C7.5

