

3.1 PURPOSE AND INTENT

This section addresses the Specific Plan’s infrastructure development plans for grading, drainage, water quality, water service/recycled water, wastewater service, and dry utilities. The Sustainable Communities Environmental Assessment accompanying the Specific Plan also addresses this infrastructure and includes additional requirements to help ensure that the infrastructure can support the community envisioned by the Specific Plan.

The plans presented in this section are preliminary and are subject to change as detailed engineering designs are prepared, reviewed, and approved by the City of Santa Clarita as part of the final construction or grading plans. With that said, the plans presented in this section do describe the extent of the proposed infrastructure and associated improvements, and the designs intended to establish the standards by which the final infrastructure/improvement plans must conform.

3.2 GRADING PLAN

3.2.1 *Existing Conditions*

The 20.4-acre Specific Plan site is shaped irregularly, and the topography is relatively flat. The Specific Plan site includes a small elevated terrace on the central northeastern portion of the site. This terrace drains toward the Santa Clara River. Elevations on the Specific Plan site range from a high of 1,505 feet above sea level at the central southeast portion of the site, to a low of 1,481 feet above sea level in the northwest portion of the site. The Specific Plan site is comprised of undeveloped land.

Within the Specific Plan boundary, topography along the western and northern boundaries has recently been altered. Lost Canyon Road was extended north of the bridge along the western boundary, creating a 2:1 slope to the road elevations of approximately 1,525 feet above sea level to 1,490 feet above sea level. Along the northern boundary, Harriman Drive (approximately 870 linear feet of road beginning at the western boundary) was built with road elevations of approximately 1,490 feet above sea level.

Conditions on the Specific Plan site have been altered by historic uses of the property, including agricultural cultivation and raising of livestock. On site there is little remaining natural vegetation, with the exception of some California big sage scrub and introduced grasses.

3.2.2 *Proposed Conditions*

Just south of Harriman Drive, a drainage ditch flowing from the northeastern edge of the site (1,494 feet above sea level) to the northwestern corner (1,476 feet above sea level; where Lost Canyon Road meets Harriman Drive) will be created.

Within the Specific Plan boundary, the earthwork will consist of approximately 60,000 cubic yards of cut, up to 60,000 cubic yards of fill, and approximately 300,000 cubic yards of overexcavation. The Specific Plan site's cut and fill areas are shown on **Figure 3.0-1, Conceptual Grading Plan**. No dirt will be hauled on or off the site.

3.3 DRAINAGE/WATER QUALITY

The MetroWalk Drainage and Water Quality Plan incorporates methodologies to meet or exceed the ongoing National Pollutant Discharge Elimination System (NPDES) Permit requirements. The Drainage and Water Quality Plan includes a comprehensive series of drainage and water quality improvements designed to allow for a system to both protect development and preserve the Santa Clara River.

3.3.1 Existing Conditions

The Specific Plan site consists of minor contributing sheet flow that independently drains to the Santa Clara River located northerly of the Specific Plan site.

3.3.2 Proposed Conditions

The Specific Plan will require construction of new drainage and water quality features to allow for a system that protects development from erosion and potential flooding and preserves the Santa Clara River. In addition to construction of conventional drainage improvements like storm drains and retention/detention systems, the Specific Plan envisions using sustainable drainage and water quality technologies, such as biofiltration areas, vegetated swales, and filter strips.

The primary objectives of the Specific Plan's drainage concept and stormwater management program are as follows:

- (a) Incorporate low-impact development (LID) practices wherever feasible;
- (b) Effectively manage wet and dry weather runoff water quality by limiting increases in runoff pollutants and flows at the source through Project Design Features (PDFs) and best management practices (BMPs);
- (c) Avoid or minimize impacts to water quality through site design and use of sustainable drainage/water quality technologies;
- (d) Comply fully with the local and regional NPDES permit requirements

Figure 3.0-2, Drainage Plan, illustrates the Specific Plan's drainage related improvements. The plan incorporates methodologies to meet or exceed NPDES permit and LID requirements. It also includes a comprehensive series of drainage and water quality facilities designed to allow for a system to protect development and preserve the Santa Clara River.

The Specific Plan's drainage concept is designed to provide drainage and maintain stormwater flows from the Specific Plan during and after buildout. As proposed, on-site surface runoff will be conveyed to a network of treatment structures, including detention and retention systems, biofiltration areas, vegetated swales, and water quality basins. In the planning areas, parking lot and roof runoff will be directed through landscaped parkways and grassy swales, or through sections of permeable pavement, to provide initial treatment prior to discharge into the drainage system.

The Specific Plan will incorporate PDFs to address water quality and hydrologic impacts, including site design, source control, treatment control, and hydromodification control BMPs. As currently planned, stormwater runoff from all developed areas within the Specific Plan site will be routed to sustainable drainage improvements, such as retention and detention systems and biofiltration areas.

The Specific Plan will incorporate numerous source-control BMPs to address pollutants of concern. These practices are designed to minimize introduction of pollutants to the maximum extent practicable, and will include education programs, animal waste bag stations, street sweeping, and catch basin cleaning.

In addition, the Specific Plan will use LID practices and treatment control BMPs as part of the final drainage/water quality design for the project area. The primary goals of LID practices are to maintain a landscape functionally equivalent to pre-development hydrologic conditions, and to minimize the generation of pollutants of concern. LID principles include the following:

- (a) **Minimize Impervious Area/Maximize Permeability.** Principles include reducing impervious surfaces (through reduced road width, for example), using permeable paving materials (where applicable), reducing land coverage of buildings by constructing multi-story structures, and incorporating biofiltration into the Specific Plan's landscape design.
- (b) **Minimize Directly Connected Impervious Areas.** Minimizing directly connected impervious areas can be achieved by directing runoff from impervious areas to vegetated areas (e.g., landscaped areas, vegetated swales).
- (c) **Select Appropriate Building Materials.** Use of appropriate building materials (e.g., roof gutters and downspouts without copper or zinc) reduces the generation and discharge of pollutants of concern in runoff; and, therefore, acts as a source control BMP.

Further, the Specific Plan will incorporate numerous treatment control BMPs that are designed to remove pollutants once mobilized by rainfall and runoff. These treatment control BMPs include the following:

- (a) **Biofiltration.** Biofiltration areas are vegetated (i.e., landscaped) shallow depressions that provide storage, infiltration, and evapotranspiration. Bioretention areas also remove pollutants by filtering stormwater through plants adapted to the local climate and soil

moisture conditions and an engineered soil mix. Biofiltration will be considered for use, wherever feasible, as part of the Specific Plan's landscaping plan.

- (b) **Vegetated Swales.** Vegetated swales treat stormwater runoff through both vegetative treatment and infiltration. Swales treat the water quality design flow as the runoff sheet-flows through grassy vegetation on the swale surface, removing pollutants by filtering stormwater through plants adapted to the local climate and soil moisture conditions. Incidental infiltration occurs into native soil when water is present. Plants use soil moisture and promote the drying of the soil through transpiration, thereby promoting volume reduction.
- (c) **Hydromodification Control Measures.** Hydromodification control measures will be accomplished through connection to an existing downstream drainage and discharge system, previously designed to accept conveyance from the Specific Plan area to prevent and control hydromodification impacts to the Santa Clara River.

3.4 WATER SERVICE/RECYCLED WATER

3.4.1 Existing Conditions

The Specific Plan site currently is undeveloped; as such, most of the site is not served by water or recycled water facilities. There is an existing 48-inch-Santa Clarita Valley Water Agency (SCVWA) potable water pipeline that crosses the project site from the southeast to the intersection of Harriman Drive and Cooper Street.

Surrounding the project site there is an existing 12-inch-diameter SCVWA potable water pipeline in Harriman Drive that turns north on Cooper Street. This 12-inch-diameter pipeline is also connected to an existing 16-inch-diameter SCVWA potable water pipeline on the west side of Lost Canyon Road.

Surrounding the project site, SCVWA has existing 6-inch-diameter recycled water in Lost Canyon Road, Harriman Drive, and Cooper Street.

3.4.2 Proposed Conditions

Based on detailed water demand estimates prepared for the project, the Specific Plan will generate a potable demand of 165 acre-feet per year (afy). Potable water demand will be met by the SCVWA through a combination of State Water Project water and local groundwater from wells located primarily in the Alluvial aquifer. The Alluvial aquifer and the Saugus Formation comprise the two-aquifer system known as the Santa Clara River Valley Groundwater Basin, East Subbasin (Basin), located in the Santa Clarita Valley. The amount delivered from each source varies year-to-year due to hydrologic and other conditions. Non-potable water demand will be met through use of recycled water from the Vista Canyon Water Reclamation Plant (WRP) located adjacent to the western boundary of the Vista Canyon Specific Plan site, directly north of Humphreys Parkway.

Figure 3.0-3, Conceptual On-Site Potable and Non-Potable Water Systems, depicts the on-site potable and non-potable water system and associated infrastructure to serve the Specific Plan. As shown on **Figure 3.0-3**, the potable water delivery system consists of a network of varying sized water mainlines that generally follow major roadways. Project potable water pipelines will pull off of the existing 12-inch-diameter SCVWA potable water pipeline in Harriman Drive at the following two locations:

1. Approximately 440 linear feet east of the intersection of Harriman Drive and Lost Canyon Road
2. The intersection of Harriman Drive and Cooper Street

A network of smaller lines would be located within the planned roadway network and would distribute the water for connection to laterals located on individual buildings. Potable water storage will come from the existing SCVWA infrastructure system.

The Vista Canyon Specific Plan’s WRP will be sized to treat approximately 400,000 gallons per day, and is owned and operated by the City of Santa Clarita. As such, it is considered a “municipal wastewater treatment plant” or publicly owned treatment work. The Vista Canyon Specific Plan site is currently within the boundary of the SCVWA. The WRP was constructed in conjunction with the Vista Canyon Specific Plan, and provide a turnkey facility to the City. The City will likely contract for operation of the WRP, and all costs associated with the ongoing maintenance of the plant will be paid for by future residents and property owners within the property through the formation of an assessment district.

3.5 WASTEWATER SERVICE

3.5.1 Existing Conditions

The Specific Plan site is mostly undeveloped, and will require wastewater infrastructure to serve the site. Because the Specific Plan site is surrounded by existing development, the provision of wastewater services to the site will not require considerable extension of distribution infrastructure. Existing south-to-north flowing 10-inch-diameter sewer pipelines are located just north of the Specific Plan site at the following two locations:

1. Approximately 440 linear feet east of the intersection of Harriman Drive and Lost Canyon Road
2. The intersection of Harriman Drive and Cooper Street

3.5.2 Proposed Conditions

The Vista Canyon WRP will treat the wastewater generated by the project. All solids from the WRP will be sent to the Santa Clarita Valley Sanitation District’s existing Valencia WRP for processing and disposal. Recycled water from the WRP will be delivered to the SCVWA as the

wholesale water agency for the Santa Clarita Valley to offset existing water demands. This water will be distributed by SCVWA through its reclaimed water distribution system both within and outside of the project boundary. Initially, some of the water may be directed to the percolation pond, or infiltration basin, adjacent to the WRP until the SCVWA recycled system is operational.

Figure 3.0-4, Conceptual Wastewater Systems, depicts the on-site wastewater system and associated infrastructure to serve the Specific Plan. The proposed wastewater system on the Specific Plan site consists of a network of varying sized sewer pipeline that generally follow proposed project roadways. Project sewer pipelines will deposit collected project site sewage to the two existing 10-inch-diameter sewer pipelines north of the Specific Plan site.

3.6 DRY UTILITIES

3.6.1 Existing Conditions

The Specific Plan site currently is mostly undeveloped, and will require electric, natural gas, and telecommunication infrastructure to serve the project. Because the Specific Plan site is surrounded by existing development, the provision of electricity, natural gas, and telecommunication services to the site will not require considerable extension of distribution infrastructure.

3.6.2 Proposed Conditions

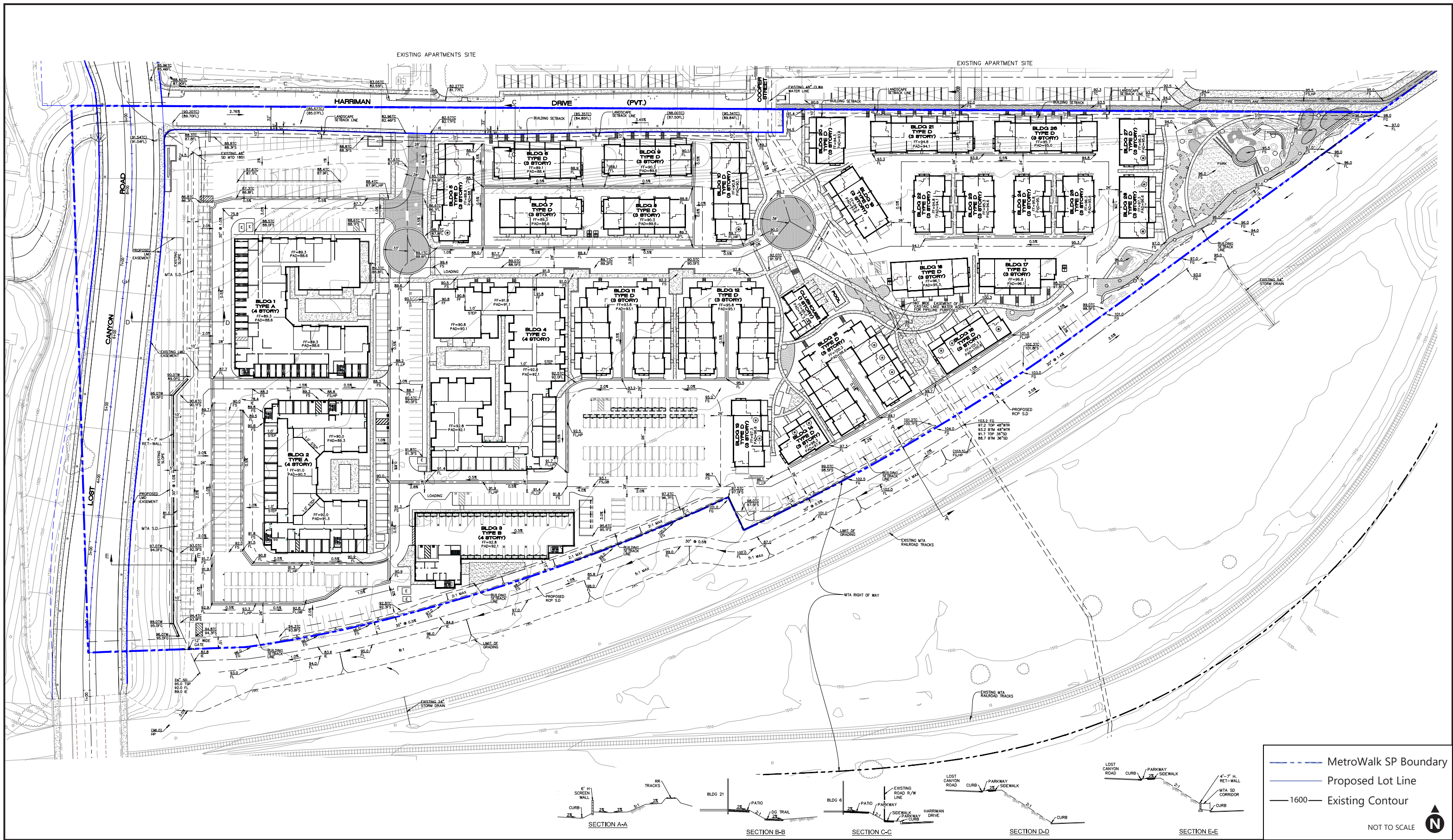
As discussed in further detail below, electric, natural gas, and telecommunication infrastructure will be installed to serve the Specific Plan. These “dry” utilities will be located within underground conduits in the public or private street corridors/rights-of-way in general conformance with the phasing of the Specific Plan. Consultation with all appropriate utilities to determine the extent of the “dry” utilities needed to serve the site will be required prior to and during the final infrastructure/improvement plan stages.

With respect to electricity, the Specific Plan site is located within the Southern California Edison service area. Primary service will come from the intersection of Harriman Drive and Cooper Street. This existing line will be extended to serve the Specific Plan’s initial development phases.

Phone service will be provided by AT&T. Primary service will come from the intersection of Harriman Drive and Cooper Street. Telephone lines will be constructed underground throughout the site within phases as development commences. Existing service lines are also located within Lost Canyon Road. These localized lines may also be extended to the site and used for the early phases of the project.

The Specific Plan site is within the Charter cable service area. Existing service lines are located at the intersection of Harriman Drive and Cooper Street. Existing service lines are also located within Lost Canyon Road. These localized lines may be used for the early phases of the project.

As to natural gas, the Specific Plan site is within the Southern California Gas Company service area. Existing service lines are located at the intersection of Harriman Drive and Cooper Street. Gas service to the site will be extended from one of these existing sources.

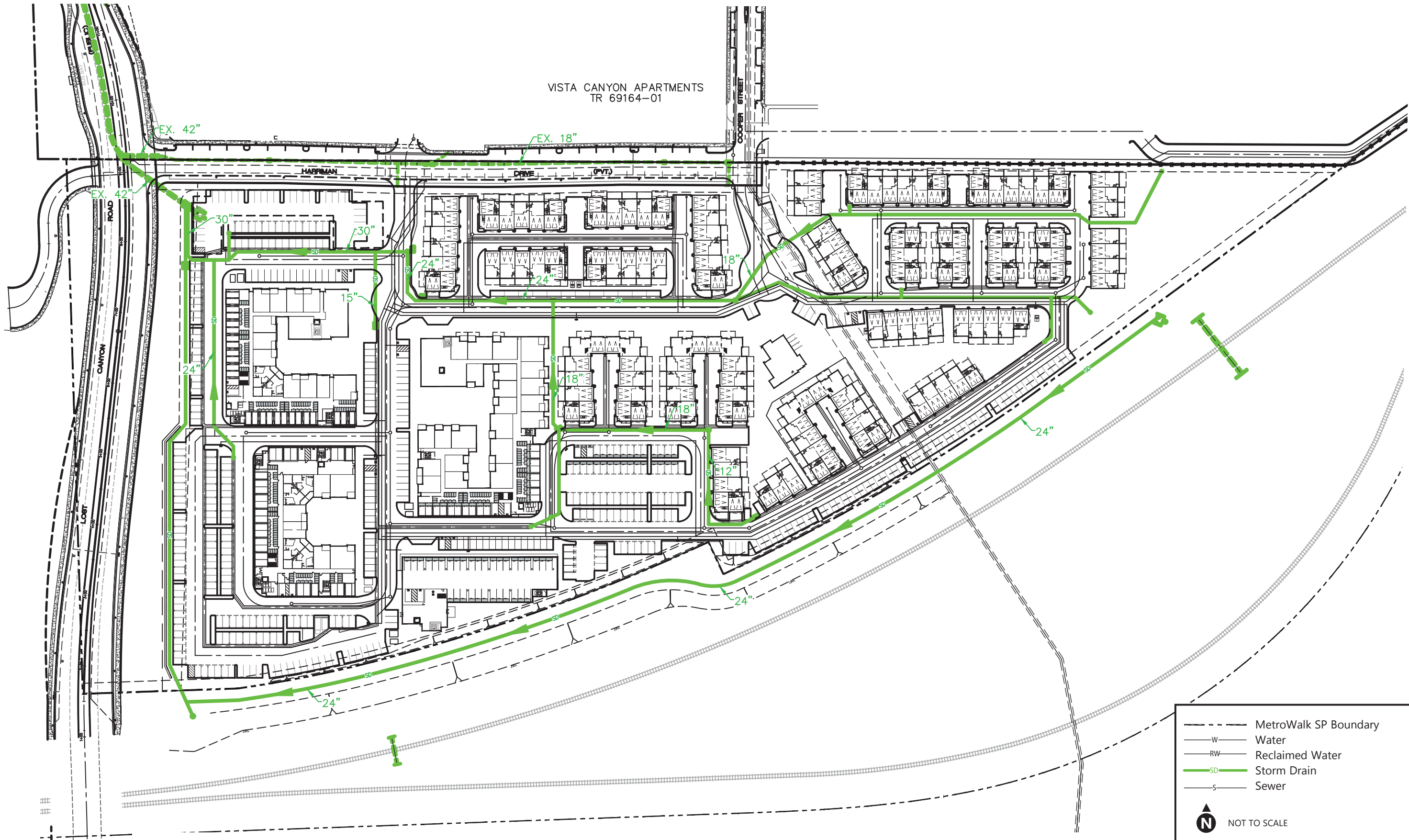


SOURCE:
New Urban West

FIGURE 3.0-1
Conceptual Grading Plan

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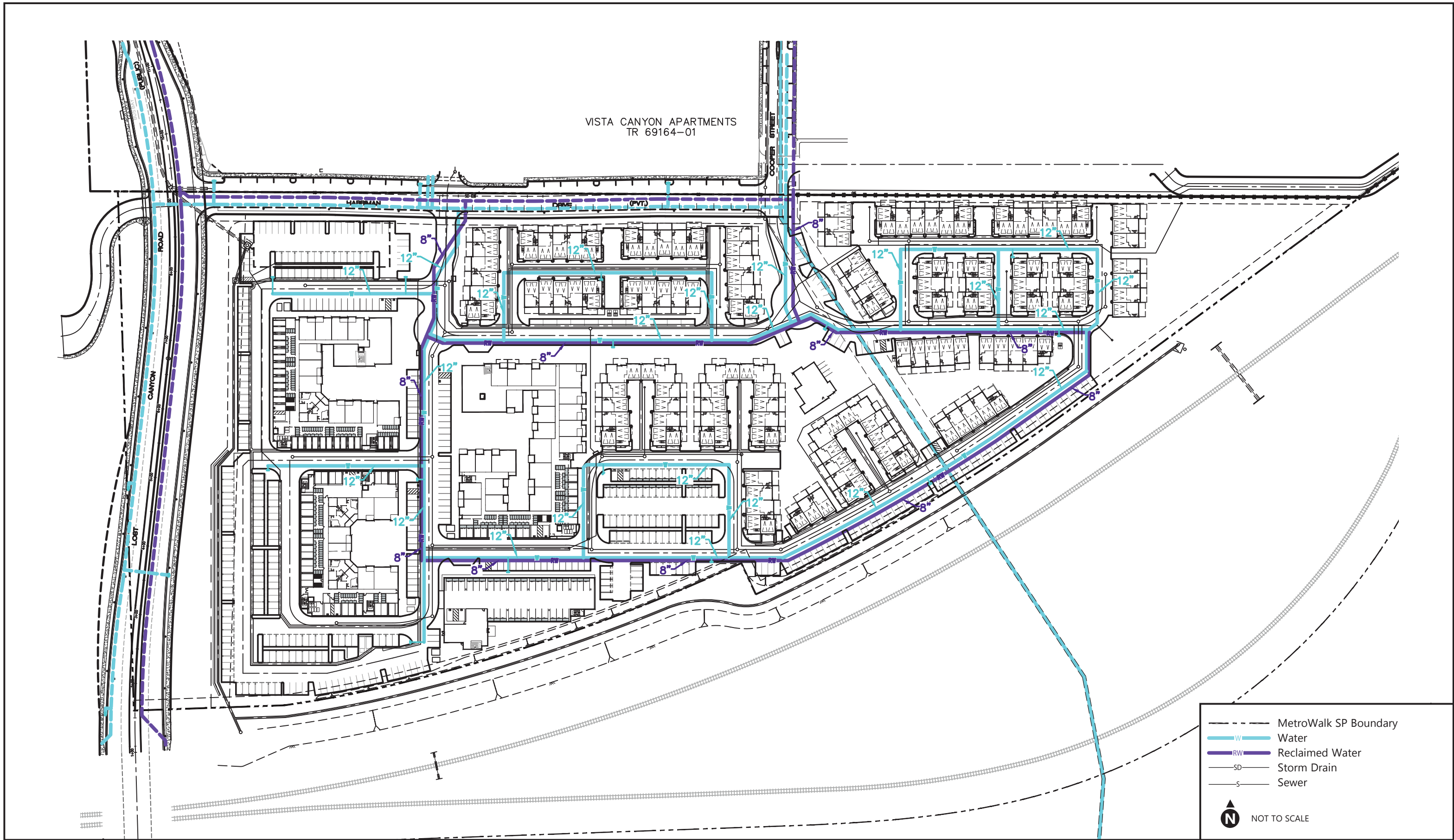
VISTA CANYON APARTMENTS
TR 69164-01



- MetroWalk SP Boundary
- Water
- Reclaimed Water
- Storm Drain
- Sewer

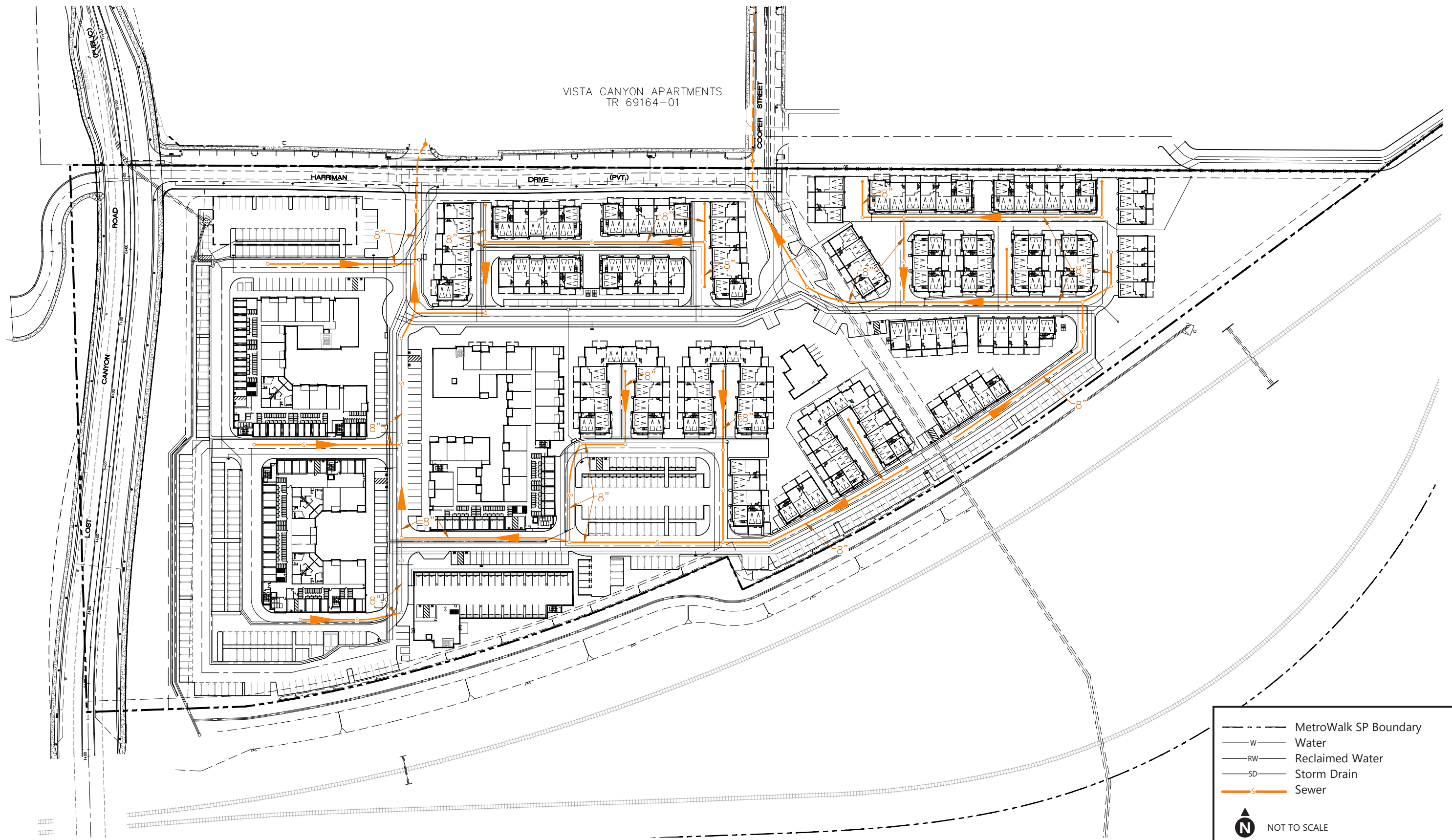
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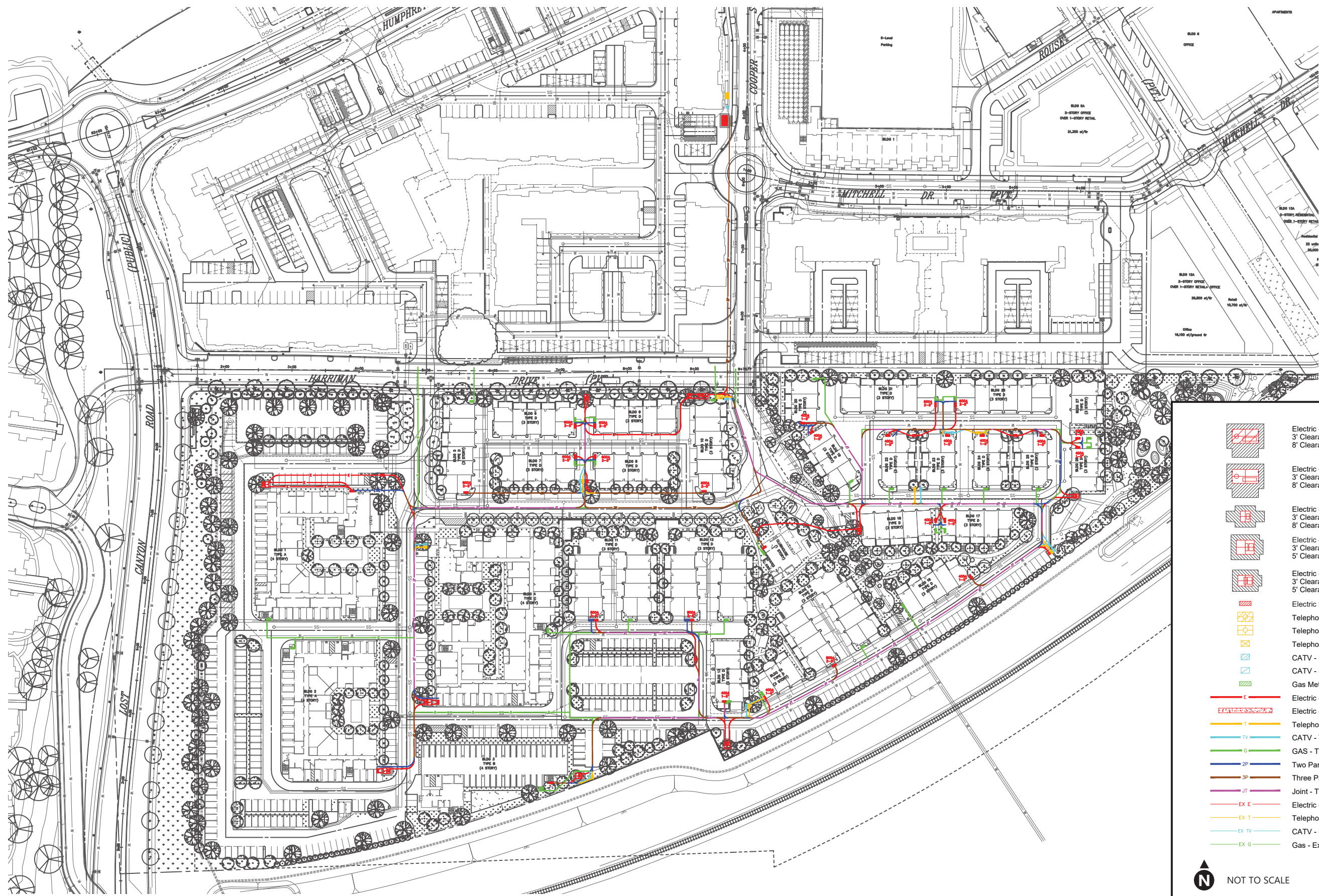
VISTA CANYON APARTMENTS
TR 69164-01



- MetroWalk SP Boundary
- W — Water
- RW — Reclaimed Water
- SD — Storm Drain
- S — Sewer

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- Electric - Existing Gas Switch (7'x14')
3' Clearance to Sides & Back
8' Clearance to Front
- Electric - Gas Switch (7'x14')
3' Clearance to Sides & Back
8' Clearance to Front
- Electric - Capacitor Bank (66"x72')
3' Clearance to Sides
8' Clearance to Front & Back
- Electric - Slab Box (8'x10')
3' Clearance to Sides & Back
5' Clearance to Front
- Electric - Slab Box (6'x8'-6")
3' Clearance to Sides & Back
5' Clearance to Front
- Electric Panel
- Telephone - Existing T-2 Manhole
- Telephone - T-2 Manhole
- Telephone - Pullbox (2'-6"x4')
- CATV - Existing Pullbox (2'-6"x4')
- CATV - Pullbox (2'-6"x4')
- Gas Meters
- Electric - Trench
- Electric - Service Cable Trench
- Telephone - Trench
- CATV - Trench
- GAS - Trench
- Two Party - Trench
- Three Party - Trench
- Joint - Trench
- Electric - Existing Trench
- Telephone - Existing Trench
- CATV - Existing Trench
- Gas - Existing Trench

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