

Mapleton City Planning Commission Staff Report

Meeting Date: January 9, 2014

Item: 2

Applicant: Jim Hunter

Location: Approximately 500 West 1600 South

Prepared by: Brian Tucker, Planner

Public Hearing Item: Yes

Zone: A-2/TDR-R

REQUEST

Consideration of Preliminary and Final Plat approval of the “Silverado Subdivision A” subdivision consisting of fourteen lots located generally at 500 West 1600 S, and a request for a Transferable Development Right Receiving Site overlay zone.

BACKGROUND AND PROJECT DESCRIPTION

The project site is approximately 15.33 acres in size and is located in the A-2 zone at approximately 500 West 1600 South. The project site consists of 4 parcels stretching north from 1600 South to where the future 1200 South will be located. The project site is mostly in the TDR-R Receiving Site Overlay Zone but one parcel does not currently include this zoning designation. The applicant is requesting approval to:

- Apply a Transferable Development Right (TDR) Receiving Site Overlay zone to the entire project area and to use seven TDR's;
- Create a fourteen lot subdivision consisting of 1 acre lots;
- Install an alternative, rural road cross section without curb and gutter between 1600 South and the future 1200 South, to be known as 500 West; and
- Install a half road extension of 1200 South along the northern boundary of the subdivision.

The DRC has reviewed the proposed application and issued the attached minutes.

EVALUATION

TDR's: Mapleton City Code (MCC) Chapter 18.76 indicates that property located within the A-2 zone can be designated as TDR Receiving areas and once a property has been rezoned to include the TDR-R designation density can be increased by one unit for each TDR certificate applied to the property except that the resulting density cannot “exceed double of what the underlying zone designation would allow”. The underlying zone allows 2 acre lots and with seven TDR Certificates the applicant wishes to create a subdivision with 1 acre lots.

Zoning: If the City Council authorizes the use of TDR's on this site, the minimum lot size will be 1 acre with a minimum frontage of 125 feet as allowed by Mapleton City Code (MCC) Chapter 18.28.050. The proposed lots comply with these requirements. The surrounding properties contain a mix of developed and undeveloped lots and parcels that vary in size. The developed parcels within ¼ mile vary from .75 to 1 acre while undeveloped parcels may include anywhere from 1 to 5 or more acres. The proposed 1 acre lots will be compatible with the developed lot sizes in the area.

Review Criteria: MCC Chapter 17.04.050.B outlines the review standards that shall be used by the Planning Commission in making its determination. These standards are shown in attachment “1”. The proposed project complies with these standards. Since the project will require the use of TDRs, the City Council will be the final decision making body on this project.

Street Design: The Mapleton City Transportation Master Plan encourages the creation of new local roads that incorporate traffic calming design. Street width strongly correlates with traffic speed; wider streets with few visual obstacles encourage faster speeds. Street width is also a major factor in street maintenance costs.

The Land Use Element of the Mapleton City General Plan encourages the preservation of the rural lifestyle in those areas designated as Rural and Low Density Residential. Tradition curbs and gutters are indicative of urban and suburban places while relatively narrow roads with no curb and gutter are more standard in truly rural places. Drainage swales are often used in place of the more urban curb and gutter to handle street run off.

New developments may request site specific street standards and new street standards may be adopted with approval of the city engineer, planning commission and city council. The proposed alternative, rural street was developed in consultation with the Mapleton City Engineer and is intended to be adopted as a standard road cross section to be used in rural and semi-rural areas where densities do not exceed one dwelling unit per acre.

STAFF RECCOMENDATION

Recommend approval of the Preliminary and Final Plats for the “Silverado Subdivision A” subdivision and the application of a TDR Receiving Site to the City Council with the attached findings and condition.

SPECIAL CONDITION

1. Any outstanding issues raised in the DRC minutes dated December 10, 2013 shall be addressed prior to plat recording.
2. This approval is contingent upon an amendment to the TDR ordinance what would allow the use of TDR’s on rezoned property.

ATTACHMENTS

1. Findings for Decision.
2. Proposed Plat with preliminary construction drawings and proposed street cross sections.
3. DRC Minutes dated 12/10/2013.

Attachment "1" Findings for Decision		
No.	Findings	
1.	The plans, documents and other submission materials (including technical reports where required) are sufficiently detailed for proper consideration.	✓
2.	The submitted plans, documents and submission materials conform to applicable city standards.	✓
3.	The proposed development conforms to city zoning ordinances and subdivision design standards.	✓
4.	There are not natural or manmade conditions existing on the site or in the vicinity of the site defined in the preliminary plan that, without remediation, would render part or all of the property unsuitable for development.	✓
5.	The project provides for safe and convenient traffic circulation and road access to adjacent properties under all weather conditions.	✓
6.	The project does not impose an undue financial burden on the City.	✓
7.	The location and arrangement of the lots, roads, easements and other elements of the subdivision contemplated by the project are consistent with the city's general street map and other applicable elements of the general plan.	✓
8.	The project plan recognizes and accommodates the existing natural conditions.	✓
9.	The public facilities, including public utility systems serving the area are adequate to serve the proposed development.	✓
10.	The project conforms to the intent of the Subdivision Ordinance as described MCC Chapter 17.01.	✓

MAPLETON CITY DEVELOPMENT REVIEW COMMITTEE MINUTES

December 10, 2013

125 West Community Center Way (400 North), Mapleton, Utah 84664

Jim Hunter submitted a subdivision plat for the Silverado Subdivision "A" on December 3, 2013. The project includes 14 lots located generally at 500 West 1600 South in the RA-2/TDR-R Zone. Based on the December 10 DRC Meeting, revised plans were submitted December 20, 2013. The Community Development comments are based on the revised plans while the Public Works comments are based on the December 3, 2013 plans.

Community Development Department

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Brian Tucker, Planner, Phone: (801) 806-9108, Fax: (801) 489-5657

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Please address the following concerns in revised drawings:

General Comments:

1. Submit completed subdivision application and required fees.
2. Submit evidence of ability to satisfy water rights conveyance requirements with subdivision application.
3. Submit evidence of ability to meet the TDR Certificates requirements with subdivision application. 7 TDR Certificates will be needed to create the proposed 14 lot subdivision.

Comments for revised plans submitted December 20, 2013:

1. Lot 1 has a panhandle portion between lot 2 of the subdivision and the McFerren property. This is a poor lot configuration and will be a maintenance issue for the future landowner. The property line between lots 1 and 2 should be adjusted to eradicate this panhandle to the greatest degree possible.
2. The 34' street cross section shows a 6' sidewalk on the west side and a 5' sidewalk on the east. Both should be 5' sidewalks.
3. A 20' PUE is shown from the back of the "concrete barrier" on the 34' cross section. A 26' PUE is preferable in order to create a 10' area between the sidewalk and the home for public utilities. The 16' portion of the PUE between the back of sidewalk and the "concrete barrier" should be a public access easement as well to ensure that the sidewalks are open to public use. A note to this end must be included on the final plat.
4. The "Curb & Gutter Type A" detail is not the correct detail for the 1600 South cross section. A 30" "UDOT B-1 C&G" detail is the correct detail.
5. A cross section is needed for 1200 South.

Engineering and Public Works Division

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Scott Bird, Public Works Operation Director, Phone (801) 489-6253, Fax (801) 489-5179

Email: sbird@mapleton.org

Address the following concerns in revised drawings:

Project: Silverado Subdivision

Date: December 10, 2013

Miscellaneous:

1. **Submit preliminary and final plans per Chapter 17.08 DOCUMENTATION REQUIREMENTS of the Mapleton City Code.**
2. Receive irrigation company approval for work on irrigation company ditches. Show Ditches.
3. Use APWA Standard Specifications and Plans and Mapleton City Addendum to APWA. Show all applicable standard drawings per APWA and Mapleton City Addendum to APWA.
4. Submit Geotechnical Report

Site Grading:

1. Remove all concrete that does not meet current city standards i.e. broken/cracked sections, used drive approaches etc.

Water System:

1. Show Plan and Profile Drawings.
2. Place all water meters and fire hydrants behind sidewalk.
3. Water model to be submitted to RB&G for review, to assure proper sizing of pipe and fire flows. The cost of this is the responsibility of the developer.
4. Verify water main location on 1600 South Road.

Pressurized Irrigation System:

1. Show Plan and Profile Drawings
2. Removal of abandoned water main on 1600 South may be required to place 12" PVC C900 Pressurized Irrigation Main.
3. Show Pressurized Irrigation-01 Detail for pressurized irrigation service with Pressurized Irrigation Service Meter Detail for PI meter box.

Sewer System:

1. Show Plan and Profile Drawings
2. Show perpendicular connection of proposed 8" PVC SDR-35 sewer main to existing 8" PVC sewer main with poured in place manhole.

Roadway:

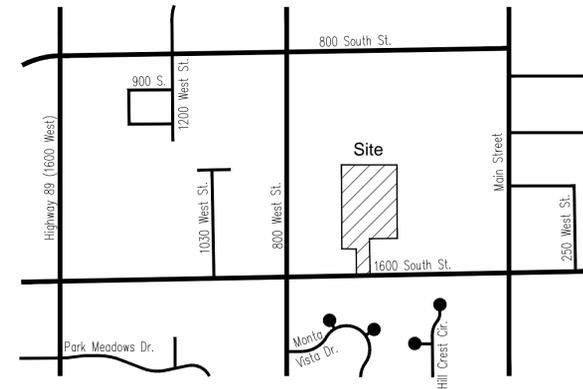
1. Show Plan and Profile Drawings.
2. Roadway: All standard drawings shall comply with APWA standard drawings and Mapleton City Addendum to APWA, this Addendum can be located on the Mapleton City web page - Mapleton.org.
3. Road x-sections:
 - a. 66' R/W UDOT S.R.-147 1600 South:
 - i. Shall show 6" of asphalt and 12" of untreated base course.
 - b. 34' R/W 500 West:
 - i. Will require approval a new Street Cross Section, 3.5" of asphalt and 1" overlay, and 8" of untreated base coarse with Sidewalk, Storm Drainage Easements and 10 feet P.U.E. behind Sidewalk with New Curb Detail.
4. Show proposed street cross section for 1200 South.
5. Show light pole locations, these poles may require relocation to be determined by Rock Mountain Power and UDOT.
6. Concrete collars required on all manholes and valve covers, use APWA standards.

Storm Drain:

1. Show Plan and Profile Drawings.
2. Storm water calculations: shall be designed for 100 year storm.
3. The basins/swells will need a maintenance plan/agreement submitted as per Storm Drain Ordinance, show landscaping of basins/swells with drive approach detail.
5. SWPPP and Land Disturbance Permit will be required.

Silverado Subdivision "A"

Symbol	Description
	Proposed 8" Sanitary Sewer Main
	Existing Sanitary Sewer Main (size noted on plan)
	Proposed Culinary Water Main (size noted on plan)
	Existing Culinary Water Main (size noted on plan)
	Existing Storm Drain pipe (size noted on plan)
	Proposed Storm Drain pipe (size noted on plan)
	Cable TV utility lines
	Existing Power lines
	New underground Power lines
	Outside Boundary line
	Existing surface improvements
	Existing Sidewalk
	Existing Sidewalk
	Existing Contour Elevation
	Finish Contour Elevation
	Finish Spot Elevation
	Drainage Flow Direction
	Water Meter (size noted on plan)
	Culinary Water Valve
	Fire Hydrant
	Sanitary Sewer Manhole
	Storm Drain Manhole
	Storm Drain Box
	top of asphalt
	top of sidewalk
	back of top of curb
	back of top of sidewalk
	Sanitary Sewer Manhole
	Storm Drain Manhole
	Water Valve
	Gas valve
	Water Meter
	edge of existing asphalt
	Public Utility Easement



Vicinity Map

NOTES:

- The fire protection items (fire hydrant, water mains, access roads, etc.) shown on this site plan are preliminary only. Detailed fire protection plans shall be submitted with the building plans. Plan reviews by the fire Prevention Bureau shall be completed prior to the issuance of a building permit. The plan reviews by the Fire Prevention Bureau may identify additional fire protection requirements mandated by the International Fire Code. Fire hydrant foot valves shall be installed at the connection point with the main water lines.
- All landscaped areas shall have an automatic, underground sprinkling system with a back-flow device to the building. Back-flow devices shall be installed and tested in accordance with the Mapleton City Code. Water meters shall be located at the back of sidewalk or curb in an area that is accessible for reading and servicing. Water meters shall not be located within areas enclosed with fences or within 10 feet (10') of any existing or proposed structure.
- If required by the Mapleton City Code or by the applicant's permit for Industrial Wastewater Discharge, a sampling manhole and fat and oil separator/grease trap shall be installed I.A.W. City standards and specifications.
- All signage shall comply with the requirements of the Mapleton City Code, Chapter 14.
- All utilities, including water and sewer laterals, water and sewer mains, storm water drains, storm water sumps, sewer manholes, water valves, etc., shall not be located under covered parking areas and shall be installed according to the Mapleton City Code.
- All roof drainage shall be routed through on-site storm water management facilities.
- At the time of construction, the City of Mapleton may determine based on professional experience and judgment and at its sole discretion, the need for the Owner/Developer to pay for, remove, and replace any existing substandard improvements such as curbs, gutters, sidewalks, drive approaches, driveways, decorative concrete, wheelchair ramps, etc., or any unused drive approaches.
- All construction shall conform to the City of Mapleton construction standards and specifications unless the improvement is within the UDOT right-of-way, in which case the construction shall conform to UDOT construction standards and specifications.

PROPERTY DESCRIPTION

Commencing at a point located North 89°11'45" East along the Section line 845.66 feet and North 33.00 feet from the South quarter corner of Section 15, Township 8 South, Range 3 East, Salt Lake Base and Meridian; thence thence North 01°37'30" West 280.83 feet; thence South 88°48'16" West 91.00 feet; thence South 87°43'24" West 79.83 feet; thence North 00°02'03" East 999.30 feet; thence North 89°45'33" East 212.12 feet; thence North 88°43'23" East 113.40 feet; thence North 88°39'52" East 332.25 feet; thence South 00°37'54" East 628.63 feet; thence South 00°37'58 East 254.45 feet; thence North 90°00'00" West 319.18 feet; thence along the arc of a 520.00 foot radius curve to the right 12.67 feet (chord bears South 12°43'56" West 12.67 feet; thence along the arc of a 430.00 foot radius curve to the left 105.57 feet (chord bears South 06°24'11" West 105.31 feet; thence South 00°37'49" East 263.81 feet; thence along the arc of a 20.00 foot radius curve to the left 31.48 feet (chord bears South 45°43'02" East 28.28 feet; thence South 89°11'45" West along 1600 South Street 178.69 feet more or less to the point of beginning.

Area = 667,623 sq.ft. or 15.33 feet

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| 1.1 | General Notes |
| 2.0 | Preliminary Plan |
| 3.0 | Utility Plan |
| 4.0 | Grading and Drainage Plan |
| 5.0 | Retention Basin Details |
| 5.0, 5.1, 5.2 | Detail Sheets |

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801-310-5378

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Orem, Utah 84058
801-224-1252

Site Data:

Zone = TDR-R
Total Area = 667,623 sq. ft. 15.33 acres
Total number of Lots = 14
Average lot size = 1.00 Acres

UTILITY GENERAL NOTES

- All installation and materials shall, at a minimum, conform to Mapleton standards, specifications, and plans.
- The contractor shall obtain a permit for utility construction at least 48 hours prior to construction.
- Contractor shall coordinate with all utility companies for installation requirements and specifications.
- All necessary inspections and/or certifications required by codes and/or utility service companies shall be performed prior to announced building possession and the final connection of service.
- The contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies, and where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The contractor must call the appropriate utility companies at least 48 hours before any excavation to request exact field location of utilities. It shall be the responsibility of the contractor to relocate all existing utilities which conflict with the proposed improvements shown on the plans.
- Underground utilities shall be installed, inspected and approved before backfilling.
- Contractor shall notify Mapleton Engineering Inspectors 72 hours before connecting to any existing utility.
- All fill material is to be in place and compacted before installation of proposed utilities.
- Existing utilities shall be verified in field prior to installation of any new lines.
- All ductile and gray iron fittings shall be manufactured in accordance with the following AWWA standards: C-104 cement mortar lining, C-110 gray-iron and ductile iron joints. All fittings shall be seal coated with bituminous material. All fitting shall be 250 PSI minimum pressure rating.
- Manholes shall be precast conforming to ASTM C-478. Concrete bases shall be poured in place or precast.
- All utility pipes shall be bedded and backfilled in accordance with the detail drawings and site work specifications.
- Tops of existing manholes shall be raised as necessary to be flush with proposed pavement elevations. Any existing manholes in unpaved areas shall be 6 inches above finished ground elevations with water tight lids.
- All concrete for encasements shall have a minimum 28 day compression strength at 4000 PSI.
- Site work contractor shall be responsible for all improvements to with 5 ft. of proposed building unless specified otherwise. Site work contractor shall coordinate with building contractor on all utility building entrance locations.
- In the event of a vertical conflict between waterlines, sanitary lines, storm lines and gas lines (existing and proposed), the sanitary line shall be ductile iron pipe with mechanical joints at least 10 feet on both sides of crossing, the waterline shall have mechanical joints with appropriate thrust blocking as required to provide a minimum of 18-inch clearance meeting requirements of ANSI A21.10 or ANSI 21.11 (AWWA C-151) (CLASS 50).
- Drawings do not purport to show all existing utilities.
- Contractor shall verify utility locations prior to subsurface work for light poles (boring etc.) and similar structures.
- See notice requirement under general project notes.
- The general contractor shall ensure that all sub-contractors have installed utilities in accordance with the specifications and design (line, grade, no sags, etc.) prior to scheduling close-out meetings with the city.
- All utilities shall be pre-tested prior to the city witnessing the test to ensure that said utilities will pass during city witness of testing. If any utilities do not pass during city witness of testing due to not performing the pre-testing, a \$5000 penalty will be applied to the general contractors.

SURVEY CONTROL NOTE:

The contractor or surveyor shall be responsible for following the National Society of Professional Surveyors (NSPS) model standards for any surveying or construction layout to be completed using Dudley & Associates ALTA Survey or Dudley & Associates construction improvement plans. Prior to proceeding with construction staking, the surveyor shall be responsible for verifying horizontal and vertical control from the survey monuments and for verifying any additional control points shown provided by Dudley & Associates. The surveyor shall also use the benchmarks as shown on the plan, and verify them against no less than three existing hard improvement elevations included on these plans or on electronic data provided by Dudley & Associates. If any discrepancies are encountered, the surveyor shall immediately notify the engineer and resolve the discrepancies before proceeding with any construction staking.

PRIVATE ENGINEER'S NOTICE TO CONTRACTORS

The Contractor agrees that he shall assume sole and complete responsibility for job site conditions during the course of construction of this project, including safety of all persons and property, that this requirement shall apply continuously and not be limited to normal working hours; and that the contractor shall defend, indemnify, and hold the owner and the engineer harmless from any and all liability, real or alleged, in connection with the performance of work on this project, excepting for liability arising from the sole negligence of the owner or the engineer.

SANITARY SEWER GENERAL NOTES

- See this sheet for general project notes.
- All sanitary sewer construction shall be in conformance with Mapleton standards and specifications.
- All gravity sanitary sewer lines shall be in conformance with Mapleton standards and specifications.
- Distances for sanitary sewer lines shall be SDR-35 PVC. Sewer line construction and materials shall conform to ASTM standards and specifications.
- Rim elevations shown are approximate only and are not to be taken as final elevation. Pipeline contractor shall use precast concrete adjustments rings, grout, and steel shims to adjust the manhole frame to the required final grade in conformance with the standard specifications. All frames shall be adjusted to final grade prior to the final lift of asphalt.
- All sanitary sewer main testing shall be accordance with the Mapleton standards and specifications copies of all test results shall provided to the engineer, the owner, and the governing authority prior to the start of the warranty period.
- Compaction of all trenches within the project site must be attained and compaction results submitted to Mapleton Department of Public Works.
- The contractor is responsible for protecting all existing structures and improvements during installation of sanitary sewer line.
- The contractor is responsible for the following:
 - Obtaining all required permits from the city or regulatory authorities at the contractors cost including permits required for work within the public right-of-way.
 - Restoration of any existing improvements including (but not limited to) fences, sod, landscaping, pavement, sprinkler systems.
 - Verification and protection of all existing utilities within the limits of construction.
 - Providing as-built drawings to Mapleton and engineer.
 - All permitting, development, location, connecting and inspection.
 - Verifying all standard details conform to the current Mapleton standards and specifications.
 - For obtaining and understanding all city, county, and state standards and specifications pertaining to the construction of sanitary sewer improvements.
 - Reference architectural plans for all connections to building services and verify locations as shown.
- The contractor shall provide all materials necessary for construction or installation of all proposed improvements shown.
- The contractor shall pothole the existing sewer main and provide an as-built elevation of the main to the engineer prior to any new construction.
- Sanitary sewer pipes shall be bedded in accordance with Mapleton standards.

STORM DRAIN GENERAL NOTES

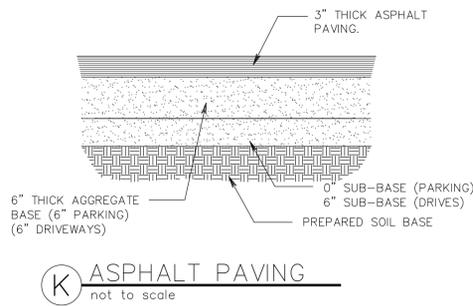
- The contractor shall be responsible for the following:
 - Obtaining all required permits from the city or regulatory authorities at the contractor's cost including permits required for work within the public right-of-way.
 - Restoration of any existing improvements including (but not limited to) fences, sod, landscaping, pavement, sprinklers systems.
 - Verification and protection of all existing utilities within the limits of construction.
 - Providing as-built drawings to the city and engineer.
 - All permitting, development, location, connection and inspection.
 - Scheduling all required inspections.
- All storm drain construction shall be in conformance with Mapleton standards, specifications, and plans.
- Distances for storm drains are the horizontal distances from center of manhole or inlet to center of manhole or inlet. Therefore, distances shown on plans are approximate and could vary due to vertical alignment.
- Rim elevations shown are approximate only and are not to be taken as final elevation. Pipeline contractor shall use precast concrete adjustments rings, grout, and steel shims to adjust the manhole frame to the required final grade in conformance with Mapleton standards, specifications and plans. All frames shall be adjusted to final grade prior to the final lift of asphalt.
- Compaction of all trenches within the project site must be attained and compaction results submitted to the engineer prior to final acceptance.
- Storm drain pipes entering structures shall be grouted to assure connection at structure is watertight.
- All storm drain pipes entering structures shall be grouted to assure connection at structure is watertight.
- All storm drain manholes in paved areas shall be flush with pavement and shall have traffic bearing lids. Manholes in unpaved areas shall be 6" above finished grade. All storm drain lids shall be labeled "storm drain".
- Contractors shall verify horizontal and vertical location of all existing storm drain structures, pipes, and all utilities prior to construction.
- Storm drains shall be bedded in accordance with Mapleton standards.

GRADING PLAN GENERAL NOTES

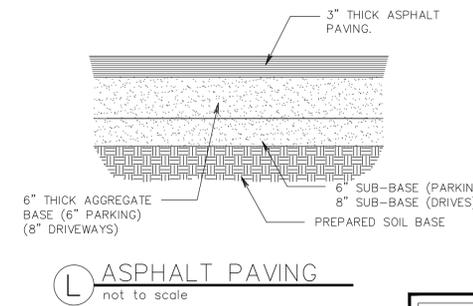
- Contours shown are for finished paving, sidewalk, slab, or ground adjustment to subgrade is the contractor's responsibility.
- All disturbed areas that are unsurfaced or are not designated as landscape areas are to be seeded, fertilized, and watered until a healthy stand of grass is obtained.
- If during the overlot grading process, conditions are encountered which could indicate an unidentified situation is present, the soils engineer shall be contacted for recommendations.
- Unless otherwise shown, not proposed slope shall exceed three (3) horizontal to one (1) vertical. All sloped areas must be protected from erosion.
- If stripped materials consisting of vegetation and organic materials are stockpiled on the site, topsoil may be placed to a height of five feet. Silt fence shall be placed around the base of the stockpile and the stockpile shall be seeded with native seed mix immediately after stripping operations are complete.
- On-site materials suitable for fill beneath drives and parking areas beyond 5' of the building shall be compacted in accordance with guidelines presented in the soils report.
- Spot elevations shall take precedence over contours and slopes shown. The contractor shall notify the engineer of the spot elevations that do not appear to be consistent with the contours and slopes. Spot elevations and specific profile design shall be used for setting elevations of curb, gutter and utilities.
- Benchmark verification: Contractor shall use benchmarks and datums shown hereon to set project benchmark(s), by running level loop between at least two benchmarks, and shall provide survey notes of such to project engineer prior to commencing construction.
- All utilities (manholes, valve covers, cleanouts, vaults, boxes, etc.) shall be adjusted to final grade prior to the final lift of asphalt.
- All earth moving and placement operations shall be in conformance with the recommendations identified in the soils report. The contractor shall have a signed and sealed copy of the soils report on the site at all times.
- The contours shown in the detention/retention pond area represent final grade. The top 6 inches of material in the detention/retention pond and berm areas shall be top soil as specified in the project standards.
- Grades within asphalt parking areas shall be constructed to within 0.10 feet of the design grade. However, the contractor shall maintain positive drainage in all pavement areas and along all curbs. All curbs shall be built in accordance to the plan. Curbs or pavement areas which do not provide proper drainage must be removed and replaced at the contractor's expense.
- Spot elevations represent flow line or top of asphalt unless otherwise noted.
- The contractor is responsible for providing his own estimate of earthwork quantities.
- All landscaped islands shall have a crown of topsoil prior to landscaping. Refer to landscape plan for specifications.
- Were new curb and gutter is being constructed adjacent to existing asphalt or concrete pavement, the following shall apply: Prior to placement of any concrete, the contractor shall have a licensed surveyor verify the grade and cross slope of the curb and gutter forms. The contractor shall submit the slopes and grades to the engineer immediately of any section which does not conform to the design or typical cross section. The contractor shall be solely responsible for curb and gutter pours without the approval of the engineer.
- The earthwork for all building foundations and slabs shall be in accordance with architectural building plans and specifications.
- Pre cast structures may be used at contractor's option.
- Existing drainage structures to be inspected and repaired as needed, and existing pipes to be cleaned out to remove
- Existing grade contour intervals shown at 1 foot intervals.
- Proposed grade contour intervals shown at 1 foot intervals.
- If any existing structures to remain are damaged during construction, it shall be the contractor's responsibility to repair and/or replace the existing structure as necessary to return it to existing conditions or better.
- The contractor shall adhere to all terms & conditions as outlined in the general permit for storm water discharge associated with construction activities.
- Contractor shall adjust and/or cut existing pavement as necessary to assure a smooth fit and continuous grade.
- Contractor shall assure positive drainage away from buildings for all natural and paved areas.
- Topographical information taken from a topographic survey by (Dudley & Associates). If contractor does not accept existing topography as shown on the plans, without exception, he shall have made, at his expense, a topographic survey by a registered land surveyor and submit it to the owner for review.
- All unsurfaced areas disturbed by grading operation shall receive 4 inches of topsoil. Contractor shall apply stabilization fabric to all slopes 3H:1V or steeper. Contractor shall place sod or hydroseed to disturbed areas in accordance with city/county specifications and maintain until a healthy stand of grass is obtained.
- Construction shall comply with all applicable governing codes and be constructed to same.
- Contractor is responsible for verifying all utilities and notifying the appropriate utility company prior to beginning construction.
- Site work shall meet or exceed site specifications.
- All concrete to have a minimum 28 day compression strength of 4000 PSI.

GENERAL NOTES

- All materials, workmanship, and construction of site improvements shall meet or exceed specifications set forth in the Mapleton City Public Works, Regulations and applicable state and federal regulations (including ADA guidelines). Where there is a conflict between these plans and the specifications, or any applicable standards, the higher quality standard shall apply. All work with public R.O.W. or easements shall be inspected and approved by the Mapleton City Public Works Inspector and/or UDOT. Inspection services and construction certification to be provided by engineer of record.
- The contractor is specifically cautioned that the location and/or elevation of existing utilities, as shown on these plans, is based on records of the various utility companies and where possible, measurements taken in the field, the information is not to be relied upon as being exact or complete. The contractor must call the local utility location center at least 48 hours before any excavation to requested exact field locations of the utilities. Prior to construction, the contractor shall verify pertinent locations and elevations, especially at the connection points and at potential utility conflicts. It shall be the responsibility of the contractor to relocate all existing utilities that conflict with the proposed improvements shown on these plans.
- The contractor shall be responsible for obtaining all necessary permits from all applicable agencies. The contractor shall notify the Mapleton City Public Works Inspector at least 48 hours prior to the start of any earth disturbing activity, or construction on any and all public improvements.
- The contractor shall coordinate with Mapleton City and all utility companies involved with regard to relocations or adjustments of existing utilities during construction and to assure that the work is accomplished in a timely fashion and with a minimum disruption of service. The contractor shall be responsible for contacting all parties affected by any disruption of any utility service.
- The contractor shall have one (1) signed copy of the approved plans, one (1) copy of the appropriated standards and specifications, and a copy of any permits and extension agreements needed for the job, on-site at all times.
- The contractor shall be responsible for all aspects of safety including, but not limited to, excavation, trenching, shoring, traffic control and security.
- If during the construction process, conditions are encountered by the contractor, his subcontractors, or other affected parties which could indicate a situation that is not identified in the plans or specifications, the contractor shall contact the engineer immediately.
- All references to any published standards shall refer to the latest revision of said standard, unless specifically stated otherwise.
- The contractor shall submit a traffic control plan in accordance with the manual on uniform traffic control devices to the appropriate right-of-way authority (city, county or state) for approval, prior to any construction activities within, or affecting the right-of-way. The contractor shall be responsible for providing any and all traffic control devices as may be required by the construction activities.
- The contractor is responsible for providing all labor and materials necessary for the completion of the intended improvements shown on these drawings or designated to be provided, installed, constructed, removed and relocated unless specifically noted otherwise.
- The contractor shall be responsible for keeping roadways free and clear of all construction debris and dirt tracked from the site.
- The contractor shall be responsible for recording as-built information on a set of record drawings kept at the construction site, and available to the Mapleton City Public Works Inspector at all times.
- Dimensions for layout and construction are not to be scaled from any drawing. If pertinent dimensions are not shown, contact the consultant engineer for clarification and annotate the dimension on the as-built record drawings.
- All structural erosion control measures shall be installed, at the limits of construction, prior to any other ground-disturbing activity. All erosion control measures shall be maintained in good repair by the contractor, until such time as the entire disturbed areas are stabilized with hard surface or landscaping.
- The contractor shall sequence installation of utilities in such a manner as to minimize potential utility conflicts, in general, storm sewer and sanitary sewer should be constructed prior to installation of water lines and dry utilities.
- All work within the public right-of-way is subject to the jurisdiction of the Mapleton City Engineering Department Standard Details Specifications and Utah Department of Transportation Standard Details and Specifications.
- The contractor shall submit a phasing plan for all work in all public roads and R.O.W.'s to Mapleton City before beginning any work on these streets. Contractor shall begin work only after Mapleton City approves the phasing plan, and a preconstruction meeting is held between the city, the engineer and the contractor.
- All operations conducted on the premises, including the warming up, repair, arrival, departure, or running of trucks, earthmoving equipment, construction equipment and any other associated equipment shall be limited to the period between 7:00 a.m. and 10:00 p.m. everyday, unless otherwise approved by the city.
- It is the responsibility of the contractor to coordinate all utility relocations consistent with the contractor's schedule for this project. Whether shown or not shown as it relates to the construction activities contemplated in these plans.
- Contractor shall be responsible for obtaining all temporary power and water to the site, paying all fees excluding tap fees and system development fees, referring to the geotechnical report prepared by (EarthTec Testing and Engineering P.C.)
- In general, limits of site work are up to (and excluding) constructing sidewalks.



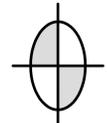
Sand Soils



Clay Soils



NORTH
1" = 30'



DUDLEY AND ASSOCIATES
ENGINEERS PLANNERS SURVEYORS
353 EAST 1200 SOUTH, OREM, UTAH
801-224-1252

Silverado Subdivision

Grading and Drainage Plan

Utah

Mapleton

Revisions

Date
11-11-2013
Scale
1" = 50'
By
TD
Tracing No.
L -

Sheet No.
C - 4.0

Lot 9
1.00 AC
43,573 sq.ft.

Lot 10
1.00 AC
43,573 sq.ft.

Lot 11
1.00 AC
43,573 sq.ft.

Lot 12
1.00 AC
43,573 sq.ft.

Lot 13
1.00 AC
43,573 sq.ft.

Lot 14
1.00 AC
43,573 sq.ft.

Lot 8
1.00 AC
43,582 sq.ft.

Lot 7
1.00 AC
43,582 sq.ft.

Lot 6
1.00 AC
43,582 sq.ft.

Lot 5
1.00 AC
43,582 sq.ft.

Lot 4
1.00 AC
43,582 sq.ft.

Lot 3
1.00 AC
43,602 sq.ft.

Lot 2
1.00 AC
43,560 sq.ft.

Lot 1
1.00 AC
43,582 sq.ft.

SDR #8
Rim = 4713.52
FL IN = 4709.12

SDMH #7
STA = 222
Rim = 4713.78
FL OUT = 4708.30
FL IN = 4708.40

Install 8.60 L.F. 15"
RCP Pipe @ -5.71%

Install 19.40 L.F. 15"
RCP Pipe @ 0.37%

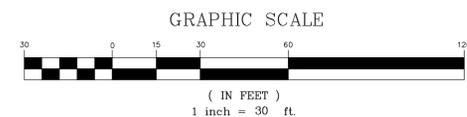
Pre-Treat CP#12
Rim = 4715.55
FL IN = 4712.44

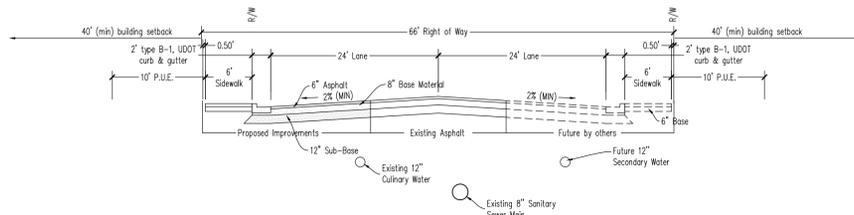
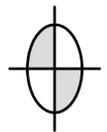
Install 29.59 L.F. 15"
RCP Pipe @ 1.72%

CAUTION!! Notice to contractors

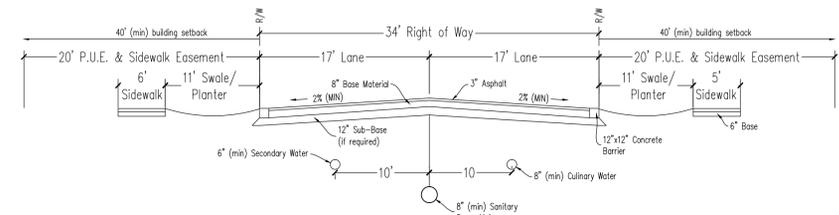
The Contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans is based on records of the various utility companies and where possible from measurements taken in the field. The information is not to be considered exact or complete. The Contractor must notify the utility location center at least 48 hours prior to any excavation to request the exact location of the utilities in the field. It shall be the responsibility of the Contractor to relocate all existing utilities which conflict with the proposed improvements shown on the plan.

Know what's below. **811**
Call 811 before you dig.
BLUE STAKES OF UTAH
UTILITY NOTIFICATION CENTER, INC.
www.bluestakes.org
1-800-662-4111

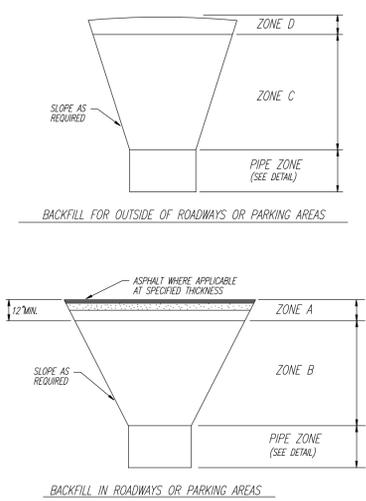
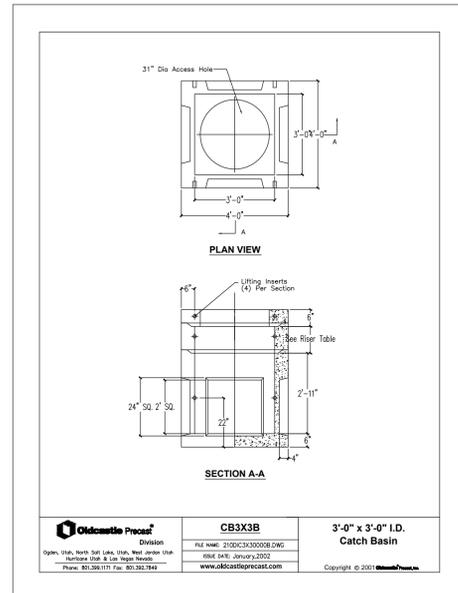




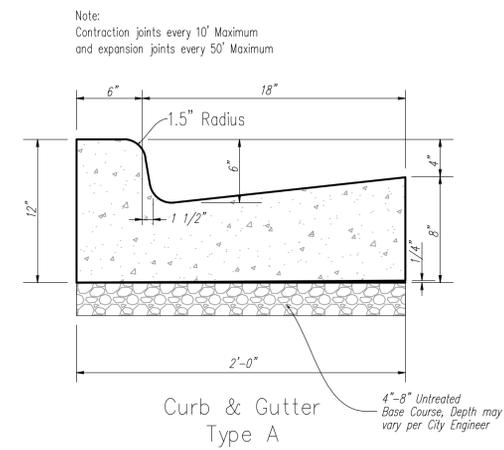
66' Street Cross Section
(1600 South Street)



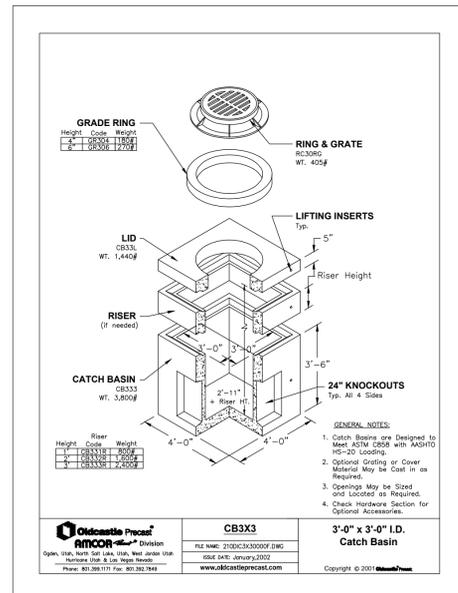
34' Street Cross Section
A-2 Zone Rural Local Street
(500 West Street & 1200 South Street)



- ZONE A SHALL BE GRANULAR ROADBASE AT THICKNESS SPECIFIED OR EQUAL TO PREVIOUSLY EXISTING CONDITIONS AND MINUS 4" MATERIAL COMPACTED TO WITHIN 95% OF MAX. DENSITY AS DETERMINED BY AASHTO T-180 METHOD C.
- ZONE B MINUS 6" MATERIAL COMPACTED AS DESCRIBED IN THE SPECS TO WITHIN 95% OF MAX. DENSITY AS DETERMINED BY AASHTO T-180 METHOD C.
- ZONE C MINUS 6" MATERIAL EXCAVATED FROM THE TRENCH EXCAVATION CONSOLIDATED BY WATER JETTING OR LIGHT MECHANICAL COMPACTION.
- ZONE D SHALL CONSIST OF LOOSE TOPSOIL SALVAGED BEFORE EXCAVATION OF MATERIAL.
- ZONE 1 CONSOLIDATED MINUS 2" GRANULAR MATERIAL.
- ZONE 2 SHALL BE CONSOLIDATED MINUS 2" MATERIAL WHERE FOUNDATION CONDITIONS CONSIST OF ROCK, HARD CLAY ROCKS LARGER THAN 2" OR OTHER UNSUITABLE CONDITIONS. IT MAY CONSIST OF UNDISTURBED EARTH WHERE NATURAL SUITABLE FOUNDATION CONDITIONS EXIST.
- ZONE 3 SHALL CONSIST OF CONSOLIDATED GRANULAR MATERIAL WITH MAX. PARTICLE SIZE NOT TO EXCEED 1" IN SIZE FOR EACH FOOT DIA. OF THE PIPE UP TO 3" IN SIZE.
- ZONE 4 SHALL CONSIST OF THE SAME MATERIALS AS ZONE 3 COMPACTED BY PNEUMATIC TAMPERS TO A MIN. DENSITY OF 95% OF STANDARD PROCTOR MAX. DENSITY (ASTHO T-99) LIFTS SHALL NOT EXCEED 6" IN THICKNESS.
- ZONE 5 SHALL BE MINUS 1/2" GRANULAR MATERIAL COMPACTED TO THE SAME REQUIREMENTS AS ZONE 4 MATERIAL.
- ZONE 6 SHALL CONSIST OF CONSOLIDATED MINUS 1/2" MATERIAL.
- ZONE 7 SHALL CONSIST OF CONSOLIDATED SAND.
- CONSOLIDATION SHALL CONSIST OF DENSIIFICATION BY WATER JETTING OR BY HAND OR LIGHT MECHANICAL TAMPER COMPACTION AFTER THE PIPE ZONE HAS BEEN FILLED WITH PROPER MATERIAL.

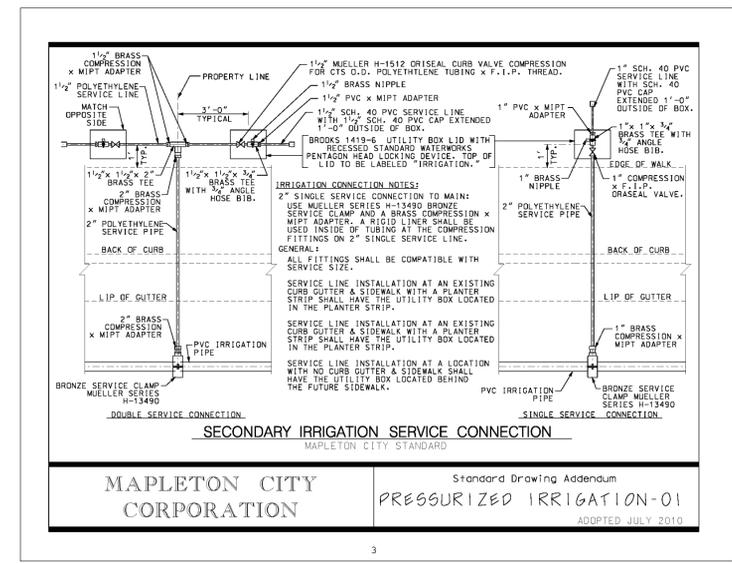


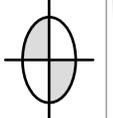
Refer to the APIWA Standards and the Mapleton City Addendum for details such as fire hydrants, sewer laterals, PI connections, Water lines, etc. Not all city details are included in this document set.



- 3/4" and 1" meter
- METER PLACEMENT:
 - A. In new construction, install meter at center of lot or per agency requirements.
 - B. All meters are to be installed in the park strip or within 7 feet of the property line (street side).
 - C. Do not install meters under driveway approaches, sidewalks, or curb and gutter.
 - PIPE: Coordinate with utility agency or property owner for type of pipe to be used outside of right-of-way.
 - INSPECTION: Prior to backfilling around meter box, secure inspection of installation by ENGINEER.
 - BACKFILL: Provide and place per APWA Section 33 05 20. Compact per APWA Section 31 23 26 to a modified proctor density of 95 percent or greater. Maximum lift thickness is 8 inches before compaction.
 - CASTING: Grey iron class 35 minimum per ASTM A 48.

- 3/4" and 1" service taps
- TAPPING: Place taps a minimum of 24 inches apart. Use a tapping tool that is sized corresponding to the size of the service line to be installed. No taps within 24 inches of end of pipe.
 - PVC OR AC PIPE: A service saddle clamp is required on all PVC and AC pipe taps unless specified otherwise.
 - TAPE: Teflon tape is required on all taps.
 - INSPECTION: Prior to backfilling around taps, secure inspection of installation by ENGINEER.
 - BACKFILL: Provide and place per APWA Section 33 05 20. Compact per APWA Section 31 23 26 to a modified proctor density of 95 percent or greater. Maximum lift thickness is 8 inches before compaction.





DUDLEY AND ASSOCIATES
 ENGINEERS, PLANNERS, SURVEYORS
 353 EAST 1200 SOUTH, OREM, UTAH
 801-224-1252

Utah

Detail Sheet

City

Revisions

Date
7-25-2012
 Scale
not to scale
 By
TD
 Tracing No.
L - 12994

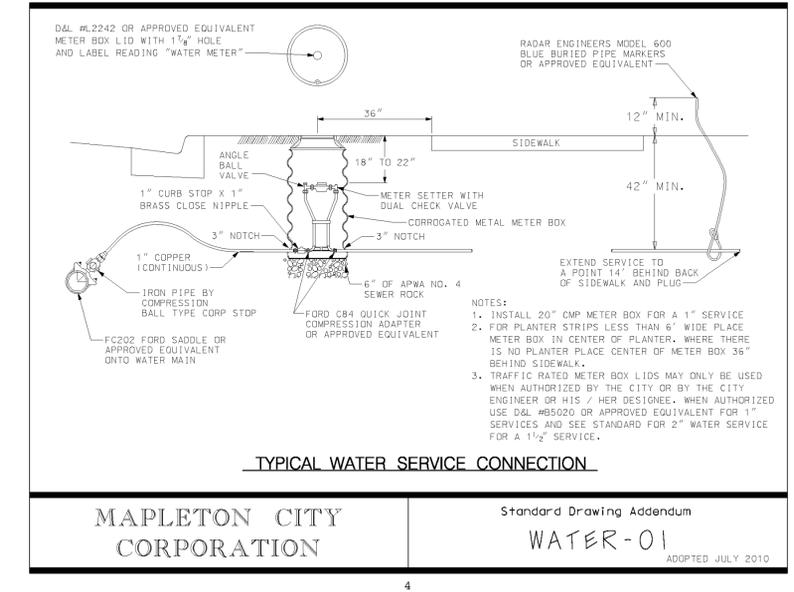
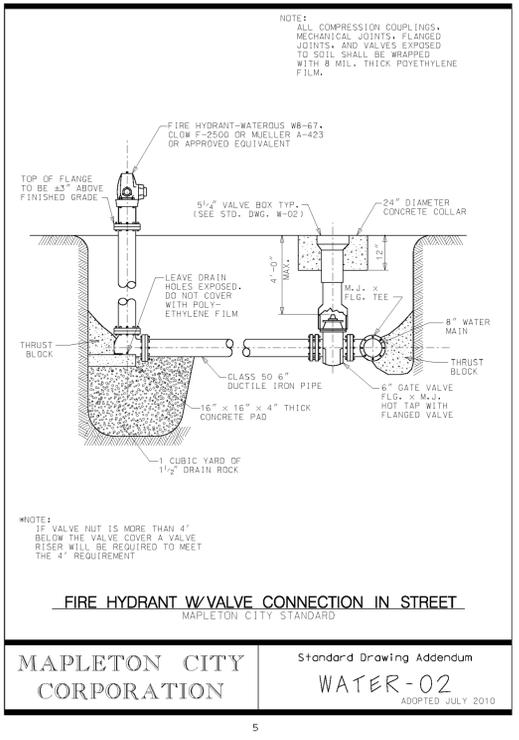
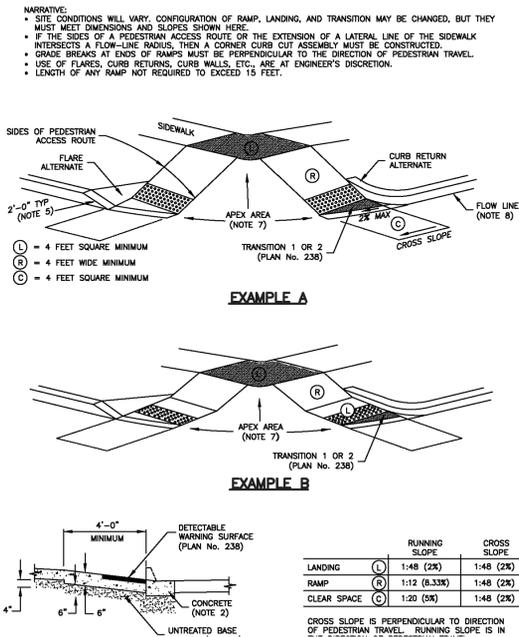
Sheet No.

C -5.1

Corner curb cut assembly

- UNTREATED BASE COURSE: Provide material specified in APWA Section 32 11 23.
 - Do not use gravel as a substitute for untreated base course without ENGINEER'S permission.
 - Place material per APWA Section 32 05 10.
 - Compact per APWA Section 31 23 26 to a modified proctor density of 95 percent or greater. Maximum lift thickness before compaction is 8 inches when using riding compaction equipment or 6 inches when using hand held compaction equipment.
- CONCRETE: Class 4000 per APWA Section 03 30 04.
 - If necessary, provide concrete that achieves design strength in less than 7 days. Caution, concrete crazing (spider cracks) may develop if air temperature exceeds 90 degrees F.
 - Place concrete per APWA Section 03 30 10.
 - Provide 1/2 inch radius on concrete edges exposed to public view.
 - Cure concrete per APWA Section 03 39 00 with type ID Class A or B (clear with fugitive dye) membrane forming compound unless specified otherwise.
- EXPANSION JOINT: Make expansion joints vertical.
 - Full depth 1/2 inch thick type F1 joint filler material per APWA Section 32 13 73. Set top of filler flush with surface of concrete.
- CONTRACTION JOINT: Make contraction joints vertical.
 - 1/8 inch wide and 1 inch deep or 1/4 slab thickness if slab is greater than 4 inches thick.
 - Maximum length to width ratio for non-square panels is 1.5 to 1.
 - Maximum panel length (in feet) is 2.5 times the slab thickness (in inches) to a maximum of 15 feet.
- FLARE: If a flare is in a pedestrian circulation area, the slope of the flare shall be 1:10 (10%) maximum measured perpendicular to the pedestrian access route.
- DETECTABLE WARNING SURFACE: A detectable warning surface is required in a ramp, transition, or landing that provides a flush connection to the street. Perpendicular and non-perpendicular connections are shown in APWA Plan No. 238.
- APEX AREA: The apex area may have curb and gutter, curb walls, flares, ramps, landings, detectable warning surface and landscaping. Flow-line grade may exceed 2 percent to match street grade.
- PROTECTION AND REPAIR:
 - Protect concrete from deicing chemicals during cure.
 - Fill flow line with water. Repair construction that doesn't drain.

LANDING AT SIDEWALK LEVEL



Refer to the APWA Standards and the Mapleton City Addendum for details such as fire hydrants, sewer laterals, PI connections, Water lines, etc. Not all city details are included in this document set.

