

**TOWN OF CRESTONE, COLORADO
CRESTONE DOWNTOWN REDEVELOPMENT PROJECT-PHASE II**

**PART II: SPECIFICATIONS
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NOTE: For purposes of brevity, these Preliminary Specifications do not include sections designated by ~~cross-throughs~~. Full Project Specifications will be issued with the final Construction Documents.

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DIVISION 1: GENERAL REQUIREMENTS

SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

A. SCOPE OF WORK

INTRODUCTION - PHASE II PROJECT DESCRIPTION

In 2013 the Crestone Town Trustees developed an improvement project for the downtown commercial area. The approved *Design Plan* defines key pedestrian and street improvement components that make up this project, and that are intended to provide an inviting experience for pedestrian shoppers and residents in the Town's core area.

Phase I of the Project was completed in 2016, and consists of the redevelopment of the intersections, as well as parking and sidewalk improvements. Also included is a small pedestrian plaza, "Little Pearl Park Plaza", on Silver Avenue at the entrance to Little Pearl Park.

For this Phase II Project the Town proposes a similar approach. When completed, Phase II will, for the first time, reach all downtown businesses with an interconnected sidewalk system. The Project strikes a balance between infrastructure improvements and aesthetics – improving safety, facilitating storm drainage, allowing for future expansion, encouraging community participation, and setting a standard for future downtown infrastructure improvements.

The Project includes provision for future street lighting, as well as a complete landscape irrigation system. Planting bed preparations and plantings will be provided by volunteers of the local "Fellowship of the Flowers". Phase II seeks to utilize CDBG funding judiciously to achieve maximum impact and value for the community.

The Project Plan is the result of close collaboration among a Trustees appointed Task Force consisting of local business and property owners. The final design responds to conditions occurring on a site-by-site basis, while conforming to applicable codes and ordinances, including ADA requirements.

END OF SECTION

SECTION 01050

CONSTRUCTION MATERIALS TESTING AND SURVEY INFORMATION

PART 1 CONSTRUCTION SURVEY REQUIREMENTS

1.1 SURVEY INFORMATION

A. The Town of Crestone will provide survey work for the project under separate contract. The Contractor shall coordinate construction activities with the Surveyor. Topography, surface features, and survey control for the Drawings are as specified in the Drawings. The surveyor shall develop and make additional surveys as required for construction including, but not limited to, control lines, stakes for working points, lines, and elevations, and will perform survey of all new manhole rim and culvert invert elevations to project baseline horizontal and vertical controls.

B. Owner performed survey work shall not relieve the Contractor's responsibility for correct lines, grades and elevations.

C. It shall be the responsibility of the General Contractor to give advance notice to and coordinate with the Town of Crestone (Town Clerk) and the Architect, to arrange for survey work in a timely manner. Delays caused to the work of the surveyor by the Contractor, and which result in additional expense, shall be paid by the Contractor, at no additional cost to the Owner.

1.2 SOILS COMPACTION TESTING

NOTE: See DIVISION 2, Section 02730, Roadway, Part 4 TESTING for requirements.

- A. The Town of Crestone will retain the services of a qualified geotechnical firm to perform on-site materials consulting and testing services as required in these specifications. The cost of these services shall NOT be included in the Contract price. However, retest of all failed tests shall be paid by the Contractor, at no additional cost to the Owner.
- B. It shall be the responsibility of the General Contractor to give advance notice to and coordinate with the Town of Crestone (Town Clerk) and the Architect, to arrange for testing in a timely manner. Delays in testing caused by the Contractor, and which result in additional expense, shall be paid by the Contractor, at no additional cost to the Owner.

1.3 CONCRETE TESTING SERVICES

- A. The Town of Crestone will retain the services of a qualified materials testing firm that complies with the requirements of ASTM E329 to perform on-site materials consulting and testing services for all concrete work. The cost of these services shall NOT be included in the Contract price. However, retest of all failed tests shall be paid by the Contractor, at no additional cost to the Owner.
- B. It shall be the responsibility of the General Contractor to give advance notice to and coordinate with the Town of Crestone (Town Clerk) and the Architect, to arrange for testing in a timely manner. Delays in testing caused by the Contractor, and which result in additional expense, shall be paid by the Contractor, at no additional cost to the Owner.

END OF SECTION

DIVISION 2: SITEWORK

SECTION 02730 **ROADWAY**

PART 1 GENERAL

1.1 SCOPE

1.1.1 This section includes all roadway work shown on the construction plans for this project.

All work for this section shall be governed by the following specifications. These specifications are from the State Department of Highways, Division of Highways, State of Colorado, Standard Specifications for Road and Bridge Construction, 2011.

- 1.1.2 Where the words “Department” or “Division” appear in the following specifications, they shall be deleted and replaced with the word “Owner”.

PART 2 PRODUCTS

2.1 GENERAL

- 2.1.1 See the following specifications.

2.2 SUBMITTALS

- 2.2.1 Item 304 – Aggregate Base Course (Class 5 or Class 6): Gradation of material from proposed source.
- 2.2.2 Item 403 – Hot Bituminous Pavement (Grading SX): Submittal requirements are listed in subsection 401.02
- 2.2.3 Item 412 – Concrete Pavement – Proposed mix design and material gradation/information showing conformance with Section 609

PART 3 EXECUTION

3.1 GENERAL

- 3.1.1 The Contractor shall confine his work to the area within the street rights-of-way and other areas designated on the plans or approved by the Owner.

The Contractor is responsible for any damage to existing structures, fences, signs, mailboxes, curb and gutters, valve boxes, manholes, inlets, etc. which occur as a result of his activities during construction

- 3.1.2 The Contractor shall excavate and dispose of the existing excess material within the roadway to the subgrade lines as detailed on the plans.
- 3.1.3 The Contractor shall scarify and recompact the subgrade as specified on the plans
- 3.1.4 The Contractor shall furnish and install the roadway base course as specified on the plans and in the specifications.
- 3.1.5 The Contractor shall install the hot bituminous pavement as specified on the plans.
- 3.1.6 The Contractor shall install concrete curb and gutter as specified on the plans and in the specifications.
- 3.1.7 The Contractor shall be responsible for all testing required relative to the subgrade, and base course material and installation
- 3.1.8 The Contractor is responsible for any required traffic control for this project.

PART 4 TESTING

NOTE: See also DIVISION 1, SECTION 01050, CONSTRUCTION MATERIALS TESTING AND SURVEY INFORMATION, 1.2 Soils Compaction Testing, and 1.3 Concrete Testing Services.

4.1 GENERAL

- 4.1.1 All testing shall be done by an independent testing agency under separate contract with the Owner. Copies of all test results shall be submitted to the Engineer.
- 4.1.2 All tests shall be performed according to the procedures outlined in the specifications. Required tests for which the procedure is not specified shall be performed in accordance with the Field Materials Manual, 1991 as Revised of the Division of Highways, State of Colorado.
- 4.1.3 Tests shall be required at the frequencies shown below:
- 4.1.3.1 Aggregate Base Course
- Gradation: one per source
 - Atterburg Limits – one per source
 - In-Place Density: one per roadway segment as determined by the engineer.

- Moisture-Density Curve: one per source
- In-place Density for scarify and recompact subgrade – one roadway segment as determined by the engineer.

4.1.3.2 Hot Bituminous Pavement (Grading SX)

- Maximum Theoretical Density (AASHTO T-209): One per approved mix design, prior to commencing paving operations.
- Asphalt Content: One per 500 tons or fraction thereof of mix produced, but not less than one each day paving occurs.
- Aggregate Gradation: One per 1000 tons or fraction thereof of mix produced.
- In-Place Density: One per street segment, but not less than one each day paving occurs.
- Segregation: per subsection 401.16

4.1.3.3 Curb and Gutter

NOTE: See DIVISION 3, SECTION 03300, CAST IN PLACE CONCRETE & REINFORCEMENT, FIELD SAMPLING AND TESTING OF CONCRETE

END OF SECTION

SECTION 02740

HOT BITUMINOUS PAVING

1. SCOPE: The work covered by this section shall consist of all necessary construction of hot bituminous paving on a prepared base.

2. MATERIALS:

a. Hot bituminous paving shall conform to Section 401 of Colorado Department of Transportation Standard Specifications except as herein otherwise specified.

b. Bituminous material shall be asphaltic cement 120-150 penetration unless otherwise directed by the Engineer.

c. Aggregate shall be in accordance with Section 703.04 of Colorado Department of Transportation Standard Specifications and shall be Grading SX for hot bituminous paving.

3.CONSTRUCTION:

a. Job mix quality shall be as follows:

<u>Test</u>	<u>Hot bituminous Base</u>	<u>Hot Bituminous Paving</u>
Marshall Stability (Minimum)	500	500
Marshall Flow	8-18	8-18
Voids	3-8%	3-5%
Voids Filled with Asphalt	65-75%	75-85%
Percentage of Asphalt	4.5-6.5%	5.6-8.0%

Asphalt percentages shown above are intended as a guide. Actual asphaltic content shall be determined by Marshall Tests to produce the desired final product.

The Engineer may raise or lower the percent of bituminous material for winter asphaltic base or asphaltic

paving upon visual and/or testing of the pavement in place to obtain a satisfactory mix.

b. The successful contractor shall provide Marshall Test results for the Engineer as required to determine the proper asphalt percentages prior to laying of any pavement and shall stand the cost of said Marshall Tests.

c. Construction procedures and limitations shall conform to Section 401.07 – 401.20 of Colorado Department of Highways Standard Specifications

d. On overlay work, the asphalt shall be feathered on the outside two feet of the street to blend in with the gutter.

END OF SECTION

SECTION 02750
AGGREGATE BASE COURSE

1. SCOPE: The work covered by this section shall consist of furnishing and placing aggregate on a prepared subgrade.
2. MATERIALS: Aggregate shall conform to Class 5 as specified in Section 703.03 of Colorado Department of Highways Standard Specifications for Road and Bridge Construction.
3. CONSTRUCTION: Construction methods, procedures, and equipment shall conform to Section 304 of Colorado Department of Highways Standard Specifications.
4. DENSITY REQUIREMENT: Gravel base course shall be compacted to a minimum of 95% of maximum density at optimum moisture content in accordance with AASHTO T-180.

END OF SECTION

SECTION 02760
BITUMINOUS PRIME COAT AND TACK COAT

1. SCOPE: The work covered by this section shall consist of all necessary applications of bituminous material for priming gravel preliminary to paving or as tack coat between layers of paving.
2. MATERIALS: Bituminous prime coat and tack coat shall be SS-1, emulsified asphalt, unless otherwise ordered by the Engineer.
3. CONSTRUCTION:
 - a. Bituminous prime coat and tack coat shall be applied to conform to Section 407.04 -407.08 of Colorado Department of Highways Standard Specifications except as herein otherwise specified.
 - b. Quantities shall be between 0.3 and 0.5 gallons per square yard for prime coat, between 0.1 and 0.2 gallons per square yard for tack coat, except as otherwise ordered by the Engineer.

END OF SECTION

DIVISION 3: CONCRETE

SECTION 03310

INTEGRALLY COLORED CONCRETE FINISHING

GENERAL

1.1 SUMMARY

A. Section Includes:

1. Integrally colored finishes for site-cast concrete.
2. If this Section conflicts with Related Sections:
 - a. This Section takes precedence for matters that affect concrete appearance.
 - b. Related Sections take precedence for matters that do not affect concrete appearance.
 - c. In case of conflicts, notify Architect for clarification.

B. Related Sections

1. Related Site Cast Concrete Sections:
 - a. Division 03 Section "Cast-in-Place Concrete": Basic requirements for concrete and coordination of sample submittal.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference:

1. Conduct conference at Project site.
2. Review procedures required to produce specified results.

B. Samples for Verification: Submit sample chip of specified concrete colors indicating Davis color name.

1.3 QUALITY ASSURANCE

A. Obtain each material from same source and maintain high degree of consistency in workmanship throughout Project.

B. Field Samples of Flatwork: Submit four samples 48 by 24 inches indicating concrete color range and texture.

C. Integrally Colored Concrete Mock-Up:

1. Provide full-scale mock-up. Construct at least one month before start of other concrete work to allow concrete to cure before observation.
2. At location acceptable to Architect demonstrate methods used for construction, including forming and alternative finishing conditions required for Project, using materials, workmanship, joint treatments, surface retarder, form ties, patching techniques, and curing methods to be used throughout Project.
3. Accepted mock-up provides visual standard for work of Section.
4. Mock-up may remain as part of Work.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Color Additive: Deliver, store, and handle in accordance with manufacturer's instructions.

- B. Concrete: Schedule delivery to provide consistent mix times from time color additive is placed in mixture until placement of integrally colored concrete.

PART 2 - PRODUCTS

2.1 CONCRETE COLORS

- A. Concrete Colors:
 - 1. Flat Work: Color to be selected by Architect
 - 2. Wall Seats & Flood Retaining Walls: Color to be selected by Architect

2.2 COLOR ADDITIVES

- A. Manufacturer: Davis Colors
 - 1. Contact Information:
 - a. Phone: 800-356-4848 or 323-269-7311.
 - b. E-mail: info@daviscolors.com.
 - c. Web Site: www.daviscolors.com.
- B. Color Additive Delivery:
 - 1. Automated Dispensing: Meter and dispense colors using computer-controlled automated color weighing and dispensing system. Use Davis Colors Chameleon liquid metering system and Hydrotint liquid color additives.
 - 2. Manual Dispensing: Use Davis Colors Mix-Ready powdered color additives in pre-measured disintegrating bags.
 - 3. Do not retemper mix or add water in field.

2.3 FORMED CONCRETE

- A. Forms and Form Facing Materials:
 - 1. Type: High density and non-vapor transmitting form face, free of rust or other defects deleterious to required finish, and with watertight joints.
- B. Form Release: Use type that is non-staining and minimizes formation of bug-holes.
- C. For best results, forms should be left in place until concrete has cured sufficiently to develop full intensity of color. Curing compound can be used as an alternative if forms must be stripped at an earlier date. See additional information in note about curing formed concrete in Part 3 of this section.
- D. Curing Compound for Formed Surfaces: Complying with ASTM C309 and approved by color additive manufacturer for use on integrally colored concrete. Do not use white-pigmented curing compounds.

2.4 FLATWORK – SIDEWALKS & LITTLE PEARL PARK PLAZA

- A. Sidewalk Finishing:
 - 1. Trowel Finish: Provide smooth surface. Hard trowel to densify surface. Do not over-trowel or start troweling late.
- B. Curing Compound for all Flatwork: Davis Colors W-1000 Clear Cure & Seal OR Color Seal II, tinted to match integrally colored concrete; complying with ASTM C309 and designed for use on integrally colored concrete. To cure, seal, and harden freshly poured uncolored or colored concrete. Apply after all bleed water and surface sheen has evaporated.

1. Maintain concrete between 65° and 85°F during curing.

2.6 ACCESSORIES

- C. Cleaning Agents: Use products known to be compatible with integrally colored concrete.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Do not place integrally colored concrete where standing water is present.

3.2 FORMED SURFACES

A. Architectural Concrete

1. As-Cast Finish: Form or form facing material shall be smooth

B. Curing and Stripping:

1. Maintain concrete between 65° and 85°F during curing.
2. Leave forms in place for as long as practical, and do not strip until concrete has reached a consistent age.
3. Stripping: If forms are removed before required curing duration, apply curing compound for formed surfaces. To extent practical, integrally colored concrete throughout project should be cured using the same methods and for the same durations.

C. Repair:

1. Fill holes and defects in concrete surface within 48 hours of form removal.
2. Make patches with stiff mortar made with materials from same sources as concrete. Adjust mortar mix proportions so dry patch matches dry adjacent concrete. Add white cement to mortar mix if necessary to lighten it.

3.3 APPEARANCE TOLERANCES

- A. Appearance: Minor variations in appearance of integrally colored concrete that are similar to natural variations in color and appearance of uncolored concrete are acceptable.

3.4 CLEANING

- A. Efflorescence: Remove efflorescence as soon as practical after it appears and as part of final cleaning.
- B. Use least aggressive cleaning techniques possible
- C. If proprietary cleaning agents are used, pre-wet surface, test cleaning agent on small, inconspicuous area, and check effects prior to proceeding. At walls, begin cleaning at top and work down. Thoroughly rinse surface afterwards with clean water. Follow cleaner manufacturer's instructions.
- D. Do not use muriatic or hydrochloric acid on integrally colored concrete.**

END OF SECTION

SECTION 03320

PERMEABLE, FLEXIBLE CONCRETE PAVING SYSTEM

PART 1: GENERAL

1.01 Description

- A. Work shall consist of furnishing all material, labor, services and related items to complete the installation of Drivable Grass® a permeable and flexible concrete pavement system in accordance with these specifications.

1.02 Submittals/Certification

- A. Product Data: Submit manufacturer's product data, including installation instructions.
- B. Samples:
 - a. Submit 8" x 8" Drivable Grass® sample

1.03 Quality Assurance

- A. Prior to commencing the work of this section, verify the accuracy of layout and grading. Verify that all sub-grades and base course aggregate conditions are as specified. Notify the owner and / or engineer of any discrepancies and coordinate the correction of those discrepancies with other trades as necessary.

1.04 Delivery, Storage and Handling

- A. Deliver materials to site in manufacturer's original palletized configuration with labels clearly identifying product style number, color, name and manufacturer.
- B. Check all materials upon delivery to assure that the proper type, grade, color, and certification have been received.
- C. Store materials in clean, dry area in accordance with manufacturer's instructions.
- D. Protect all materials from damage due to jobsite conditions and in accordance with manufacturer's recommendations. Damaged materials shall not be incorporated into the work.

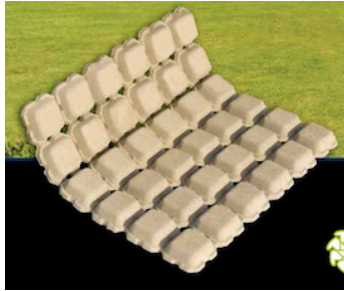
1.05 Project Conditions

- A. Review installation procedures and coordinate Drivable Grass® installation with other work around installation area.
- B. All adjacent hardscape and paving required by construction documents shall be completed prior to the installation of the Drivable Grass® paving mats.
- C. Gradients for Drivable Grass® paving mats can vary from flat to 12%. For steeper conditions, consult with manufacturer.
- D. Cold weather applications:
 - i. Coordinate with Town Clerk and Maintenance personnel.
 - ii. Snowplow equipment operators should be educated about the underlying surface prior to beginning snow removal.
 - iii. Drivable Grass® should be depressed ½" below the top of the RIBBON CURB OR V-PAN that separates the parking areas from paved surfaces to protect the product from the snowplow blade.
 - iv. Do not use frozen materials or materials mixed or coated with ice or frost.
 - v. Do not build on frozen, wet, or muddy subgrade
- E. Protect partially completed paving against damage from other construction traffic when work is in progress. Projects using aggregate infill instead of planting are drivable upon completing infill.
- F. Areas adjacent to Drivable Grass® installation should be protected during construction.

PART 2: PRODUCTS

2.01 Acceptable Manufacturer

- A. Soil Retention Products, Inc, Corporate Office: 2501 State Street, Carlsbad, CA 92008. Phone: 760-966-6090 and 800-346-7995, fax: 760-966-6099, website: www.soilretention.com, e-mail: sales@soilretention.com.



- B. No substitutions shall be approved unless equal field test data is submitted. Compressive strength results shall not be based on sand infilled lab tests.

2.02 Permeable, Flexible Pavement System

- A. Permeable, Flexible Pavement System: Drivable Grass[®]
- | | |
|---|---------------|
| a. Nominal Dimensions in inches (l x w x h) | 24 x 24 x 1.5 |
| b. Gross Area of Each Mat in square feet | 4 |
| c. Weight of Each Mat in pounds | 45 |
| d. Plantable OR aggregate Area in percent | 60 |
| e. Mats per pallet (each) | 60 |
| f. Area Covered per Pallet in square feet | 240 |
- B. Color **Buff/tan**
- | | |
|--|--------------------|
| a. Flexibility (minimum radius of curvature in inches) | 12 |
| b. Concrete Compressive Strength @ 28 days in psi | 5000 |
| c. Propriety Grid Reinforcement | Engineered Plastic |
- C. Filter Fabric and Base Aggregate: See Construction Drawing, Sheet 14 of 18, Alder Street Parking Detail.
- D. Bedding Course – Defined as the initial material directly beneath the Drivable Grass[®] mats. A minimum thickness of .25” to 1” sand for non-planted applications.
- a. Sand shall be clean, non-plastic, and free from deleterious or foreign matter. The sand shall be sharp and manufactured from crushed rock. Do not use limestone screenings stone dust.
- E. Infill – Infill is not intended to support vegetation, and shall consist of 3/8” minus stone (pea gravel) or decomposed granite fines. Consult with Architect for Infill selection. For non-cohesive infills staking is recommended – consult manufacturer and see specific alternative infill details and instructions.

PART 3: EXECUTION

3.01 Subgrade Preparation

- A. Proof roll foundation area as directed to determine if remedial work is required.
- B. Architect shall inspect the excavation and approve prior to placement of base material or fill soils.

3.02 Installation of Aggregate Base and Sand Setting Bed

- A. Install and compact aggregate base as required by the contract drawings.

- B. Install, level and compact bedding course upon which permeable, flexible pavement system will be placed.
- 3.03 Install Drivable Grass[®] Pavement System
- A. Install permeable, flexible, pavement system in accordance with the manufacturer's guidelines.
 - B. Install system to the line, grades and locations required by the contract documents.
 - C. Install mats in one axial direction. Butt mats against each other leaving no significant gaps. Adjust mats as required to maintain good grid pattern alignment.
- 3.04 Fill System with Infill Material
- A. Spread infill uniformly across the mats with a push broom. Leave the infill about ¼" below the concrete pad surface.

END OF SECTION

DIVISION 5: METALS

SECTION 05500

CAST IN PLACE TACTILE/DETECTIBLE WARNING SURFACE PLATES

Description: This Section includes Specifications for furnishing and installing permanently embedded Cast In Place Tactile / Detectable Warning Surface Tiles (CIP) with an in-line truncated dome pattern embedded in all curb ramps at the locations and to the dimensions shown on the Drawings, in accordance with the Contract Documents and as directed by the Architect.

General: Detectable warnings shall be an integral part of the ramp and comply with section 4.29 of the ADA Accessibility Guidelines and section 705* of the 2010 ADA standards for accessible design.

Dome Size (4.29.2 and 705.1.1*): Truncated domes in detectable warning surface shall have a base diameter of 0.9 inch (23 mm) minimum and 1.4 inches (36 mm) maximum, a top diameter of 50 percent of the base diameter minimum, to 65 percent of the base diameter maximum, and a height of 0.2 inch (5.1 mm).

Dome Spacing (4.29.2 and 705.1.2*): Truncated domes in a detectable warning surface shall have a center-to-center spacing of 1.6 inches (41 mm) minimum and 2.4 inches (61 mm) maximum, and a base-to-base spacing of 0.65 inch (17 mm) minimum, measured between the most adjacent domes on a square grid.

Product Data: Submit manufacturer's literature describing products, installation procedures and maintenance instructions.

Samples for Verification Purposes: Submit two (2) Tactile Warning Surface samples of the kind proposed for use. Samples shall be properly labeled and shall contain the following information: Name of Project, Submitted by, Date of Submittal, Manufacturer's Name, and Catalog Number.

Product: Neenah "Quick Connect" Detectable Warning Plates, or approved equal.

Length Width Catalog No.

24" x 24" 4984-24Q

24" x 30" 4984-30Q

Installation Steps

1. If necessary, connect multiple plates together.
2. Pour concrete.
3. Use supplied lifting springs and a construction 2x4 or pipe to lift plates into position.
4. Set plates in wet concrete at final position.
5. Remove lifting springs.
6. Press assembly into wet concrete to final elevation.
7. Finish concrete around assembly
8. Remove any wet concrete that may have spilled on to the plate surface.

Installer's Qualifications: Engage an experienced installer who has successfully completed Tactile Warning Surface installations similar in material, design, and extent to that indicated for the Contract.

Contrast (4.29.2 and 705.1.3*): Detectable warning surfaces shall contrast visually with adjacent walking surfaces — dark-on-light.

Materials: Cast gray iron conforming to ASTM A-48 class 30A minimum.

Finish: Unpainted

END OF SECTION

DIVISION 10: SPECIALTIES

SECTION 10430

EXTERIOR SIGNAGE & MARKING

Reference

2010 ADA Standards for Accessible Design, Dept of Justice, September 15, 2010.
ADA CHAPTER 5: GENERAL SITE AND BUILDING ELEMENTS
Section 502 Parking Spaces

General

Car and van parking spaces shall comply with all requirements of Section 502, including Vehicle Spaces, Access Aisle, Ground Surfaces, and Identification.

Identification

Parking space identification signs shall include the International Symbol of Accessibility. The sign identifying the van parking space shall contain the designation "van accessible". Signs shall be installed on standards with the sign 60 inches minimum above the finish ground surface measured to the bottom of the sign.

Handicapped Reserved Parking Sign (see below)

12" x 18" Engineer Grade Prismatic Reflective Sheeting on Heavy-Gauge (.063) Rust-Free Aluminum, with 3M 1160a protective clear laminate overlay film, and vandal proof parking sign hardware, in

compliance with specifications from the Federal Manual of Uniform Traffic Control Devices (MUTCD).

Van Accessible Handicapped Parking Sign (see below)

12" x 18" Engineer Grade Prismatic Reflective Sheeting on Heavy-Gauge (.063) Rust-Free Aluminum, with 3M 1160a protective clear laminate overlay film, and vandal proof parking sign hardware, in compliance with specifications from the Federal Manual of Uniform Traffic Control Devices (MUTCD).



END OF SECTION

DIVISION 16: ELECTRICAL

SECTION 16510

STREET LIGHTING SYSTEM

REFER TO ELECTRICAL DRAWINGS & SPECIFICATIONS, sheets E1 and E2 FOR ADDITIONAL INFORMATION.

The Work to be performed under this Section includes undergrounding electrical sleeving for power distribution from the location of the Main Distribution Center Rack (at "Little Pearl Park") to locations of Pedestrian Style Post Lights, Bollards and Step Lights in Little Pearl Plaza, and to locations of future Street Style Post Lights and Pedestrian Style Post Lights in the Project Area. See Electrical Plans.

Work to be performed under this Section includes construction of concrete foundations for Pedestrian Style Post Lights and Bollards in the Plaza area; installation of grounding rods; inground pullboxes as required; and placement of underground conduit feeds and anchor bolts at each foundation location (prior to concrete pour).

The Work includes complete installation of light fixtures at Little Pearl Park: (2) Pedestrian Style Post Lights, (6) Bollards, and (3) step lights. Provide underground electrical service and install weatherproof receptacle at the base of the existing Box Elder tree, at the west side of the new plaza.

Main Distribution Center includes Rack, Main Panel, time clock, weatherproof receptacles, and junction boxes as required.

Concrete Foundation size for Bollard Lights shall be 16" Diam X 4 ft deep
Concrete Foundation size for Pedestrian Style Lights shall be 18" Diam X 4 ft deep

Pedestrian Light Fixtures shall be as manufactured by Architectural Area Lighting, 16555 East Gale Ave., City of Industry, CA 91745. Tel: 626 968 5666 (www.aal.net). See APPENDICES B1 through B4 for Fixture CUT SHEETS, including Bollard, Luminaire, Fixture Arm and Pole.

Step Light Fixture shall be as manufactured by BEGA, 1000 Bega Way, Carpinteria, CA 93013. Tel: 805 684 0533. See APPENDIX B5 for Fixture CUT SHEET.

Schedule 40 PVC to be utilized below grade. Conduit can be placed in a common trench with underground irrigation sleeving where practicable. Use Metallic conduit where exposed above grade.

Arrange for coordination with, and obtain all necessary approvals and permits from agencies having jurisdiction, including the Colorado Department of Regulatory Agencies (Electrical Permit) and the San Luis Valley Rural Electric Coop.

Electrical Subcontractor shall coordinate installation with the Work of the General Contractor and the Irrigation Subcontractor.

END OF SECTION

END OF PART II, PROJECT SPECIFICATIONS