Intro

ADA Operations Contact Info

Todd Grugel	ph: 651-366-3531	email: todd.grugel@state.mn.us
Joe Zilka	ph: 651-366-3311	email: joseph.zilka@state.mn.us
Harvey Unruh	ph: 651-216-2912	email: harvey.unruh@state.mn.us

http://www.dot.state.mn.us/ada/construction.html

MnDOT ADA Training

(1803) PROSECUTION OF WORK SPECIAL PROJECT ADA REQUIREMENTS

Your Destination...Our Priority

ADA & PROWAG

- Congress passed the Americans with Disabilities Act (ADA) in 1990.
- U.S. Access Board's Public Rights-of-Way Accessibility Guidelines (PROWAG) issued in 2005
- ADA building regulations revised in 2010, effective March 2012
- All pedestrian facilities and shared use trails within MnDOT right-of-way must be constructed according to PROWAG (as of February 2010) and the 2010 ADA Standards.

Coordination of Contract Documents

(1504) A requirement appearing in one of the contract documents is as binding as though the requirement appears in all.

Order of Precedence:

- Addenda
- Special Provisions
- Project Specific Plan Sheets
- Supplemental Specifications
- Standard Plan Sheets and Standard Plates
- Standard Specifications

1803 Special Provision Highlights

- The appropriate pedestrian ramp details for each quadrant are included in the plans. The Engineer may provide additional details to those provided in the plans that meet the PROWAG guidelines as the need arises and field conditions dictate.
- The contractor must designate a **RESPONSIBLE** person **FAMILIAR** with PROWAG to assess proposed sidewalk layouts at each site before work begins.
- Any time work the contractor is performing concerns pedestrian facilities, the contractor's representative shall be on site.

Pedestrian Access Route (PAR)

- Pedestrian Access Route must be constructed to meet the following criteria:

(1) PAR

- Minimum 4 ft. wide Pedestrian Access Route (PAR)
- Maximum cross slope of 2%

(1) PAR

- Vertical discontinuities (bumps) must be less than 0.25 inches.
- Must provide positive drainage without allowing any ponding

(1) PAR

- All grade breaks within the PAR shall be constructed perpendicular to the path of travel.

(2) Landings

- Landings are part of the PAR and must be constructed to meet the following criteria:

(2) Landings

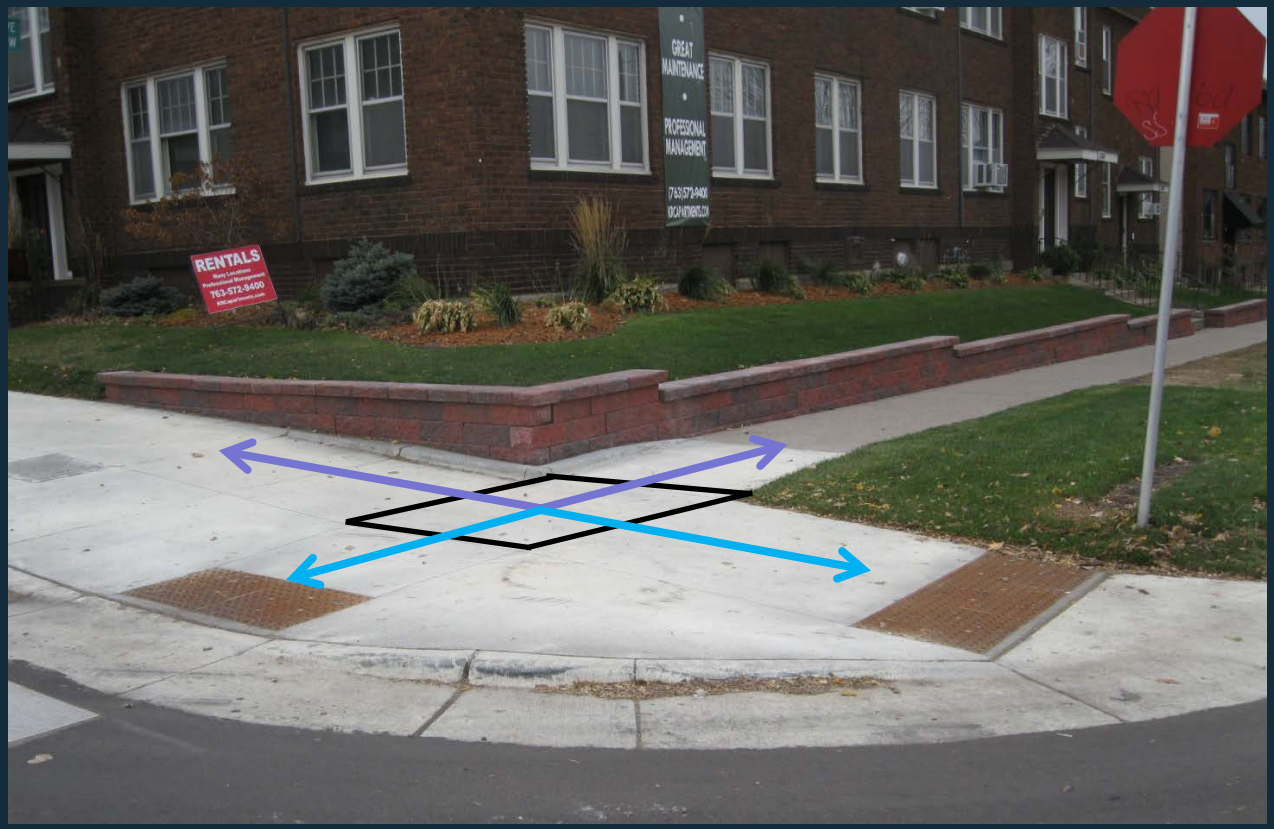
- 4 feet by 4 feet minimum width.

(2) Landings

- Maximum slope of 2% in all directions.

(2) Landings

- Required at all locations where the PAR changes directions or inverse grades.
- Must be connected to the PAR.



2521 Concrete Walk ADA Landings

S-3.1 CONSTRUCTION REQUIREMENTS

(A) **Concrete Walk** – The walk shall be constructed as detailed in the Plan and conform to the requirements of MnDOT 2521, Walks.

To avoid corner breaks, all walk edges shall be formed and constructed perpendicular to the back of curb and gutter sections and concrete structures for a one foot minimum distance.

All existing signs shall be salvaged and reinstalled as directed by the Engineer or as indicated in the Plan.

(B) **Grading** – If not otherwise detailed in the Plan, all fill sections shall be graded flush with the top of walk for a minimum 18 inches from the edge of walk and then down at a maximum 1:3 slope to existing terrain. The Contractor shall blend in the toe of fill slope and adjacent areas so as not to adversely affect drainage.

(C) **Landings** – An initial landing is the first required landing of a pedestrian ramp. All initial landings required at the top of a ramped sloped surface (>2% longitudinal slope), shall be formed and placed separately in an independent concrete pour. This does not include initial landings placed at roadway grade such as depressed corners, parallel ramps, rural flat landings, or flat cut-throughs. Secondary landings consist of all landings beyond the initial landing. These secondary landings do not require a separate landing pour.

Wet casting or drill and grouting of dowel bars will be required in accordance with the details shown in Standard Plan 5-297.250 Sheet 5 of 5. These bars may be either smooth or deformed and shall be installed with 2" minimum concrete cover.

When not accounted for in the Plan, payment for these bars will be made under Item 2301.602 (Drill & Grout Reinforcement Bar (Epoxy Coated)) by the Each at the Predetermined Price of $ 10.00 per bar furnished and installed. All necessary subgrade preparation and aggregate base placement for the entire ramp construction limit shall be done before the initial landing is constructed at each location.

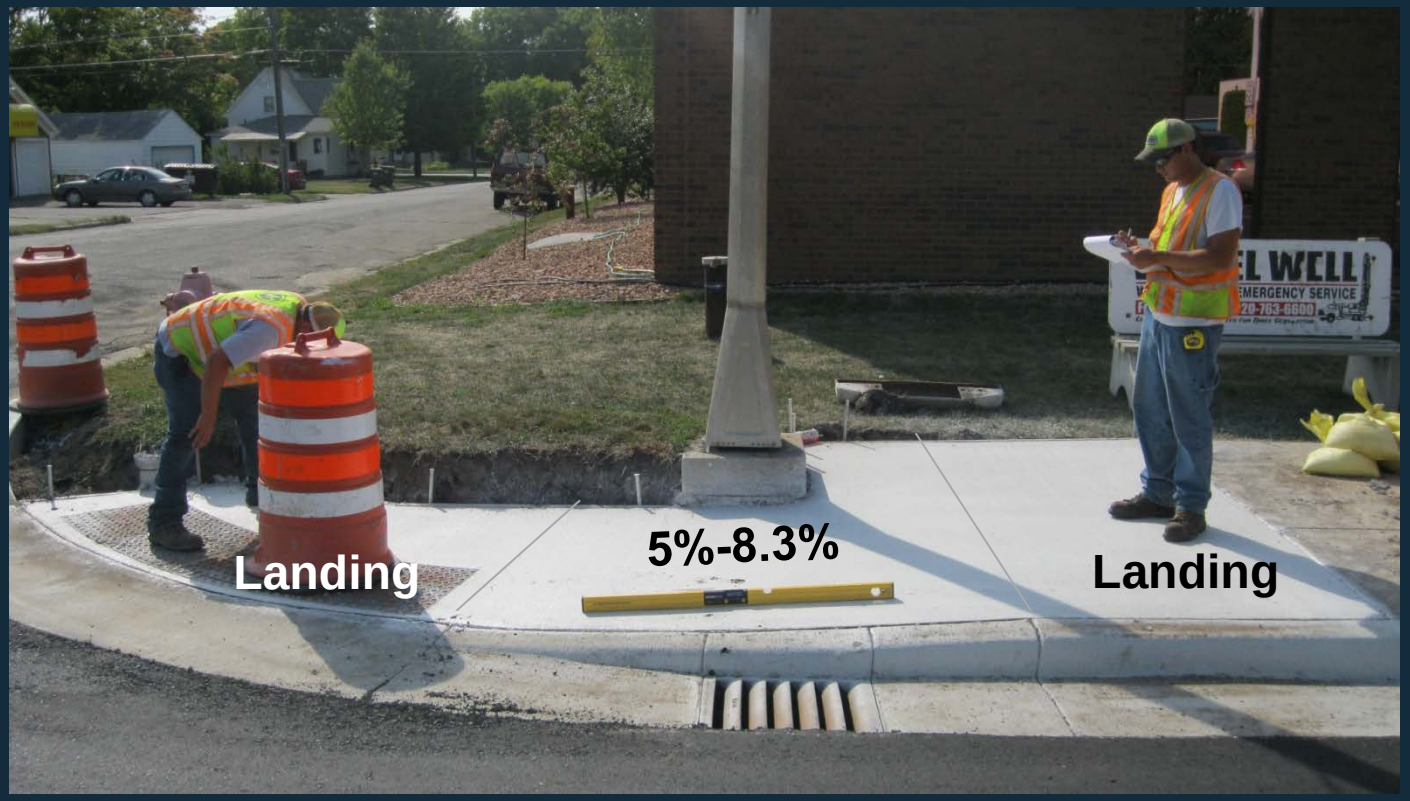
S-3.2 METHOD OF MEASUREMENT

(3) Ramps

- Longitudinal slopes less than 5% in the direction of travel require no landing at the top of the ramp (unless the PAR changes direction).

(3) Ramps

- Longitudinal slopes between 5% and 8.3% in the direction of travel require a landing at the top of the ramp and at a change of direction.



“ Hold Points”

- If the Contractor constructs any pedestrian or shared-use facilities that are not per plan, do not meet the above requirements, or do not follow the agreed upon resolution, the Contractor shall be responsible for correcting the deficient facilities with no compensation paid for the corrective work.
- To ensure that the pedestrian facilities are constructed in compliance with PROWAG, the contractor shall follow the following three steps:

Step (1) Removals

- The Contractor shall use the appropriate ramp details in the plan and identify the removal limits for the sidewalk and curb and gutter.
  If the contractor determines the removal limits are not adequate to meet PROWAG, the Contractor shall stop work immediately on that quadrant and consult the Engineer to determine the best solution.
- (If the Contractor and Inspector are actively working together at the beginning of the project most issues should be resolved quickly).

Determine the best solutions

4 Steps to help in determining the best solutions:

1. Check Your construction plan sheets including notes and tabulations .
2. Check Standard Plans find Curb Ramp type and notes that provide additional direction.
3. Check Special Provisions 1803 and any ADA pay items and follow construction requirements.
4. Consult your Engineer first and if additional guidance needed contact ADA office.

Step (1) Removals

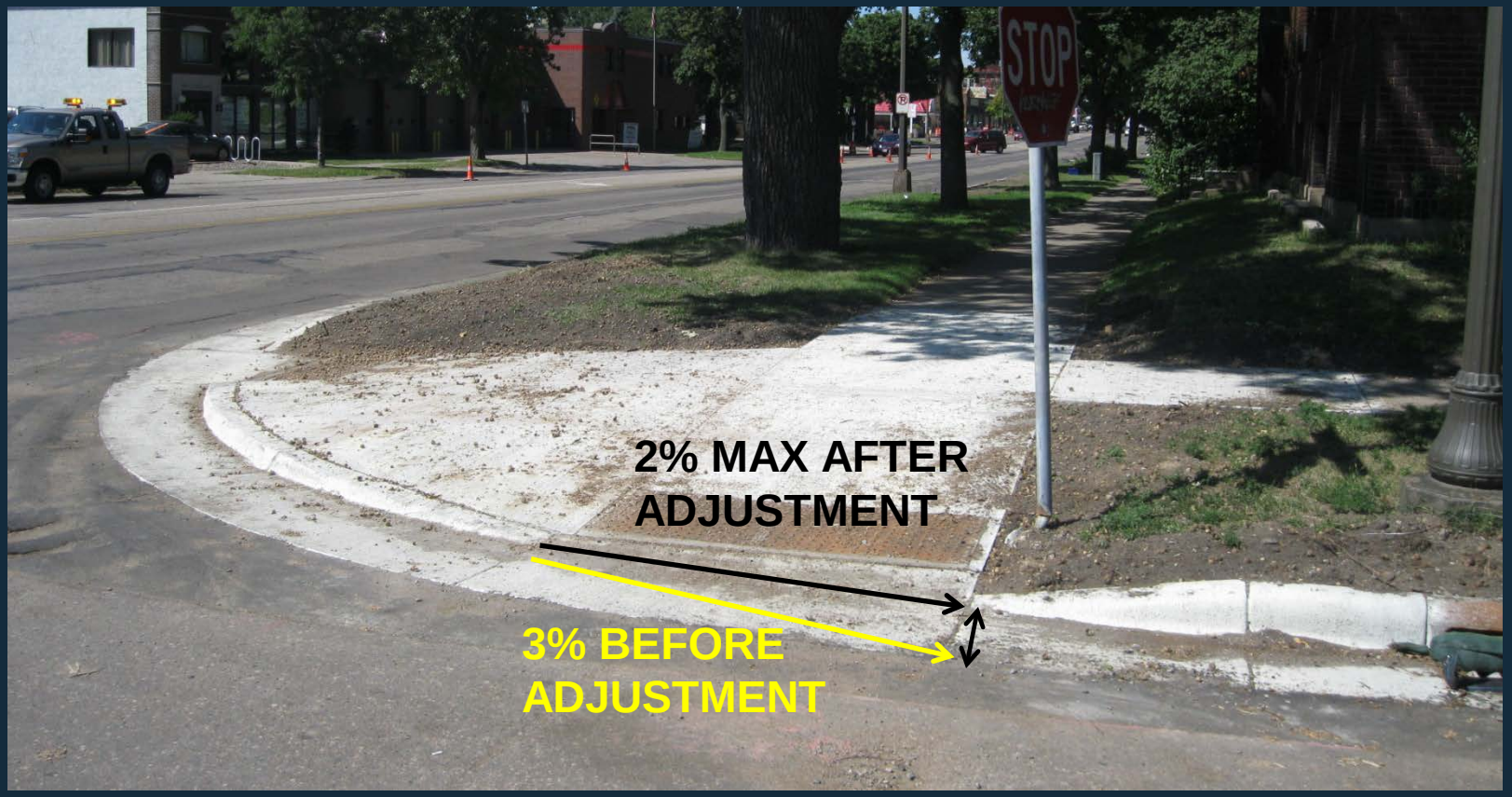
- Once the Engineer and the Contractor reach agreement on how to proceed, the Contractor may finish the removals.

Step (2) Curb and Gutter

- The Contractor shall not alter any existing drainage patterns unless called for in the Plans.
- Verify zero height curb and curb transitions
- Verify that proposed curb flow line will provide positive drainage as well as maintain existing gutter inflows/outflows.
- The curb and gutter shall be constructed as detailed in the Plan with a defined flow line.
- The Contractor shall consult with the Engineer to determine a resolution if any of these conditions cannot be met.

Step (2) Curb and Gutter

- Spec. 2531Concrete Curb and Gutter ADA : if gutter flow line exceeds 2% The flow line should be adjusted to allow a flatter slope, but still provide positive drainage.



Step (3) Landings and Ramps

- After the curb and gutter has been correctly poured and the contractor has set the sidewalk forms and prior to placing the concrete curb ramps/sidewalk:

Step (3) Landings and Ramps

- The Contractor shall verify the slope requirements will be achieved.
- If any requirements cannot be met, the Contractor shall meet with the Engineer to determine the best solution.

Setting Forms

In addition, the longitudinal slopes shown in the Construction Plans and the Standard Plans shall be utilized unless these conditions cannot be met. The starting point for setting the forms on the controlling ramp leg should be the following:

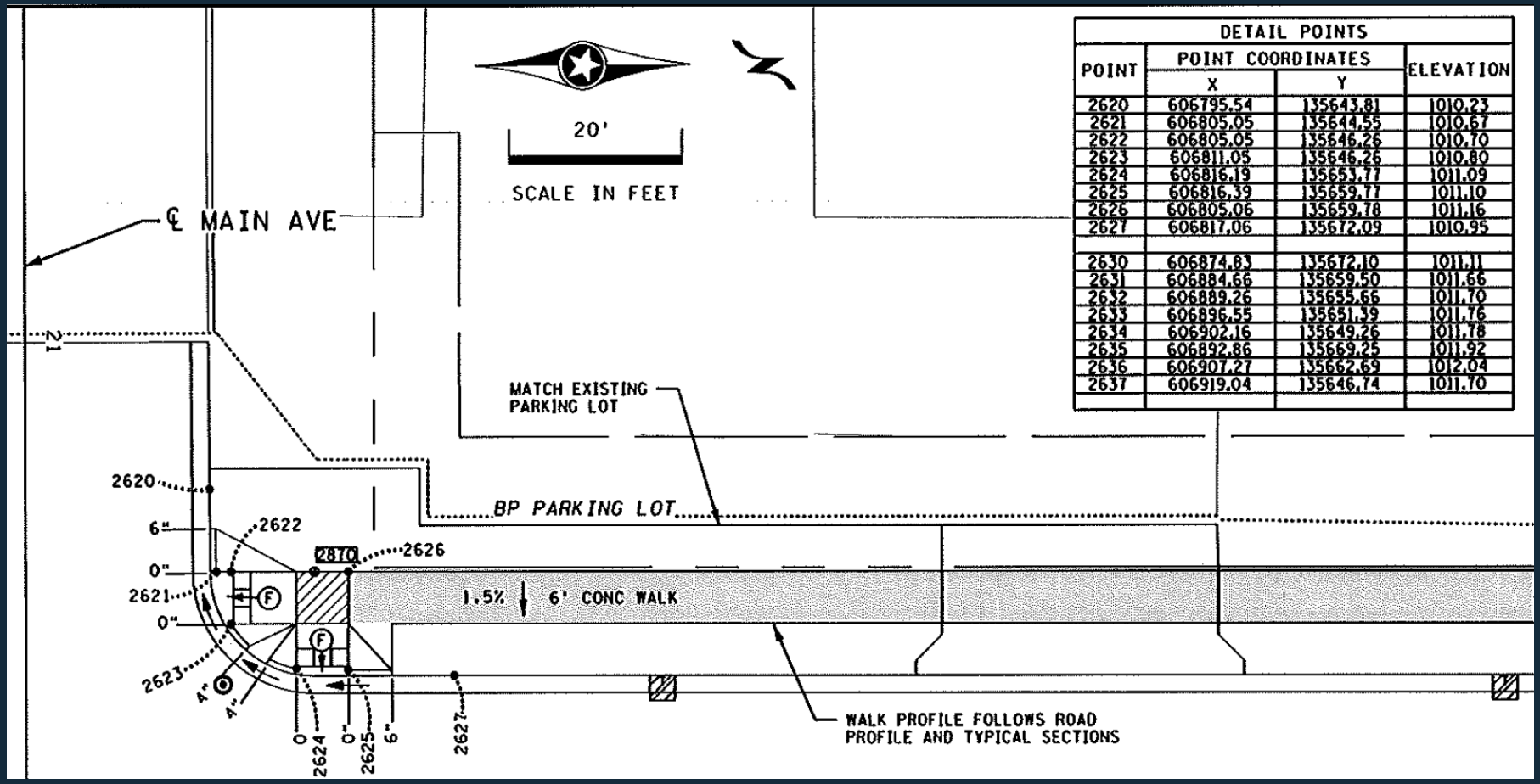
Steep (S) = 7%
Flat (F) = 4%
Landing = 1.5%
Sidewalk Cross Slope = 1.5%
Fan ramp = 5%

(C) Layout Responsibilities

- It shall be the responsibility of the Contractor, or the Contractor's Surveyor if applicable, to lay out all proposed work at each intersection in accordance with plans and provisions.
- Layout includes: Placement of grade breaks, curb transitions, gutter flow lines, truncated dome placements, crosswalk marking placement, flares, landing limits, and ramp limits.
- This layout work shall be incidental.

(C) Layout Responsibilities

If specific dimensions are not provided in the plan, the contractor shall be expected to scale dimensions from the plan.

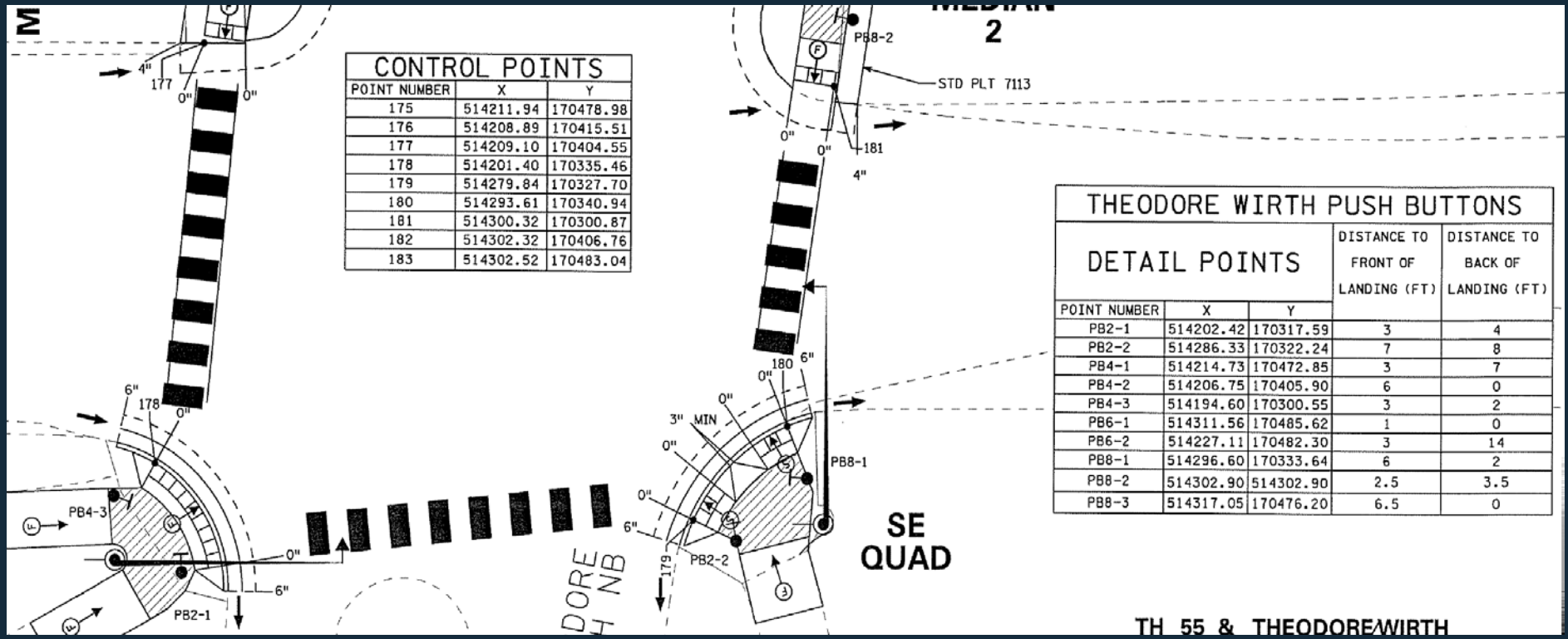


DETAIL POINTS

POINT	POINT COORDINATES		ELEVATION
	X	Y	
2620	606795.54	135643.81	1010.23
2621	606805.05	135644.55	1010.67
2622	606805.05	135646.26	1010.70
2623	606811.05	135646.26	1010.80
2624	606816.19	135653.77	1011.09
2625	606816.39	135659.77	1011.10
2626	606805.06	135659.78	1011.16
2627	606817.06	135672.09	1010.95
2630	606874.83	135672.10	1011.11
2631	606884.66	135659.50	1011.66
2632	606889.26	135655.66	1011.70
2633	606896.55	135651.39	1011.76
2634	606902.16	135649.26	1011.78
2635	606892.86	135669.25	1011.92
2636	606907.27	135662.69	1012.04
2637	606919.04	135646.74	1011.70

(C) Layout Responsibilities

- If contractor surveying is not called for in the plans, the owner's surveyor will only stake points and elevations provided in the plans.



(D) Contractor Responsibilities

- The Contractor shall utilize measures and methods when working near existing buildings and or private landscaping that will avoid damaging the buildings face or structure or other private property.

(E) Concrete Placing and Finishing

- The Contractor shall round all joints and edges of the walk with a ¼ inch radius edging tool.

(E) Concrete Placing and Finishing

- Contraction joints shall extend to at least 30% of sidewalk thickness. If saw cutting provide $^{1}/_{8}$ inch wide contraction joint as per MnDOT 2521.3D

(E) Concrete Placing and Finishing

The contractor shall also have the option of providing saw cuts to construct the sidewalk joints.

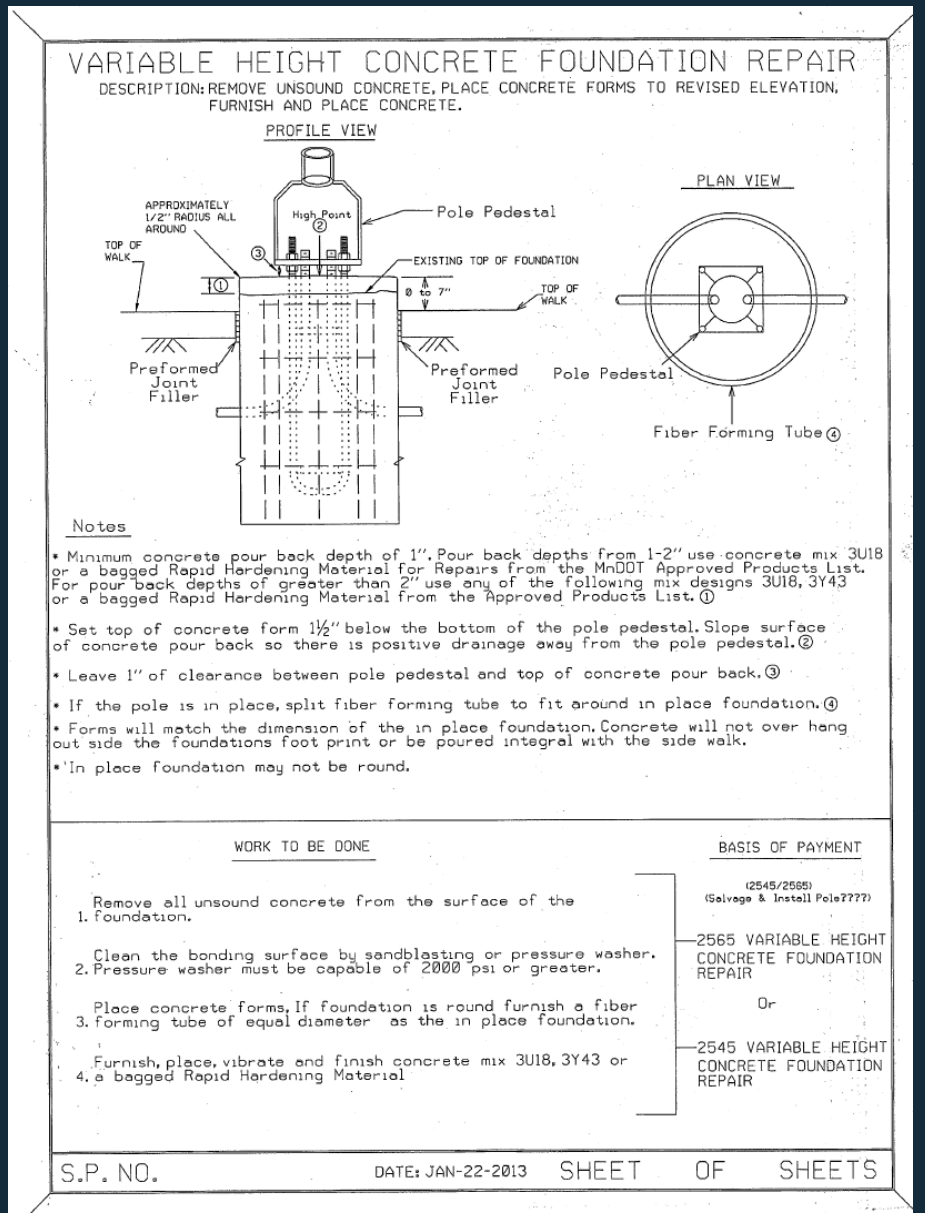
This work shall be considered incidental with no extra compensation paid.

(F) Concrete Placing and Finishing

- Where sidewalk is constructed around fixed structures and the grade has been changed, the sidewalk shall be finished around these structures to the satisfaction of the Engineer at no additional cost.

(F) Concrete Placing and Finishing

- Variable height concrete foundation repair detail on web site.



VARIABLE HEIGHT CONCRETE FOUNDATION REPAIR

DESCRIPTION: REMOVE UNSOUND CONCRETE, PLACE CONCRETE FORMS TO REVISED ELEVATION, FURNISH AND PLACE CONCRETE.

PROFILE VIEW

PLAN VIEW

Notes

* Minimum concrete pour back depth of 1". Pour back depths from 1-2" use concrete mix 3U18 or a bagged Rapid Hardening Material for Repairs from the MnDOT Approved Products List. For pour back depths of greater than 2" use any of the following mix designs 3U18, 3Y43 or a bagged Rapid Hardening Material from the Approved Products List. ①
* Set top of concrete form 1½" below the bottom of the pole pedestal. Slope surface of concrete pour back so there is positive drainage away from the pole pedestal. ②
* Leave 1" of clearance between pole pedestal and top of concrete pour back. ③
* If the pole is in place, split fiber forming tube to fit around in place foundation. ④
* Forms will match the dimension of the in place foundation. Concrete will not over hang out side the foundations foot print or be poured integral with the side walk.
* In place foundation may not be round.

WORK TO BE DONE	BASIS OF PAYMENT
1. Remove all unsound concrete from the surface of the foundation.	(2545/2565) (Salvage & Install Pole????)
2. Clean the bonding surface by sandblasting or pressure washer. Pressure washer must be capable of 2000 psi or greater.	2565 VARIABLE HEIGHT CONCRETE FOUNDATION REPAIR
3. Place concrete forms. If foundation is round furnish a fiber forming tube of equal diameter as the in place foundation.	Or
4. Furnish, place, vibrate and finish concrete mix 3U18, 3Y43 or a bagged Rapid Hardening Material	2545 VARIABLE HEIGHT CONCRETE FOUNDATION REPAIR

S.P. NO. DATE: JAN-22-2013 SHEET OF SHEETS

(G) Pedestrian Signal Systems

Push buttons face towards the intersection and parallel to outside edge of crosswalk.

(G) Pedestrian Signal Systems

Push buttons shall be minimum 4’ maximum 10’ from back edge of curb(1.5’ to 4’ if mounted on signal pole as indicated in plan or as approved by Engineer.

(G) Pedestrian Signal Systems

At rural locations without curb and gutter it is recommended APS push buttons be set back 8 ft. from edge of roadway for preservation purposes.

(G) Pedestrian Signal Systems

Shall be offset no more than 5 ft. from projected outside edge of crosswalk/domes

(G) Pedestrian Signal Systems

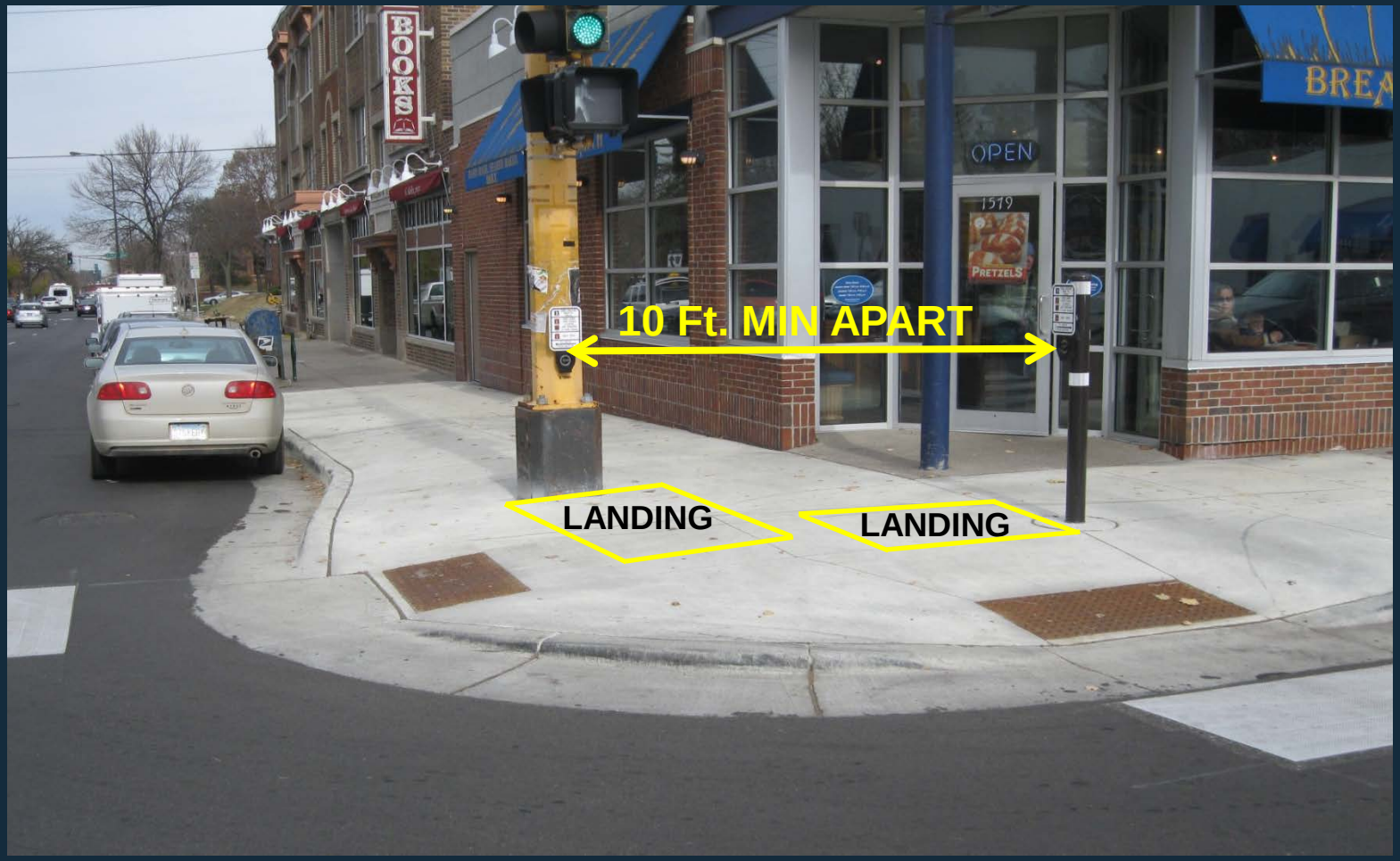
Shall be offset no more than 5 ft. from projected outside edge of crosswalk / domes.

(G) Pedestrian Signal Systems

Push buttons shall be a minimum 10 ft. apart, except in islands and medians then provide 6 ft. minimum clear distance.

(G) Pedestrian Signal Systems

4’ x 4’ minimum landing immediately adjacent with 2% max slope in all directions



(G) Pedestrian Signal Systems

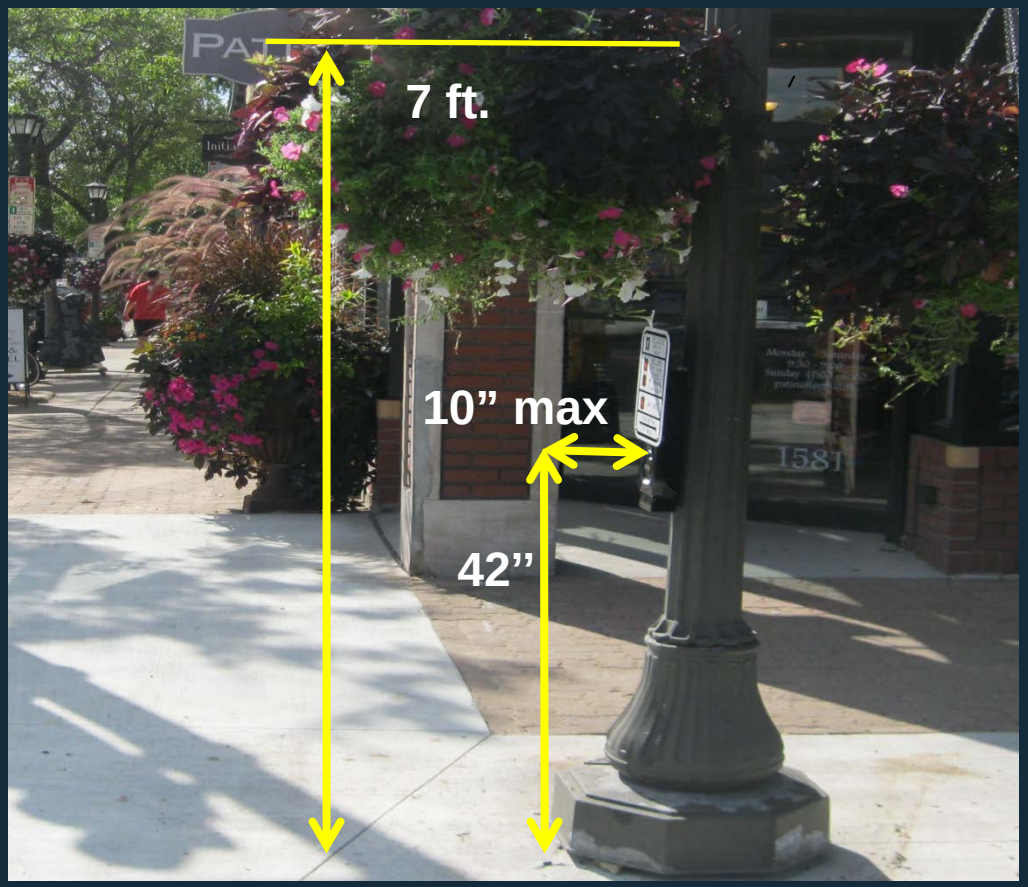
Provide 6 ft. clear distance between obstructions whenever possible for MAR (maintenance access route).

(G) Pedestrian Signal Systems

All new hand holes shall be placed outside the PAR ,Inclusive of ramps and landings.

(G) Pedestrian Signal Systems

The push button shall be mounted at a height of 42 inches, have 10 inch maximum side reach, and 7 ft. minimum overhead sign clearance.



(G) Pedestrian Signal Systems

Crosswalks shall be striped in a straight alignment between the outside edges of detectable warnings with no kinks unless shown as kinked in the plan.

(G) Pedestrian Signal Systems

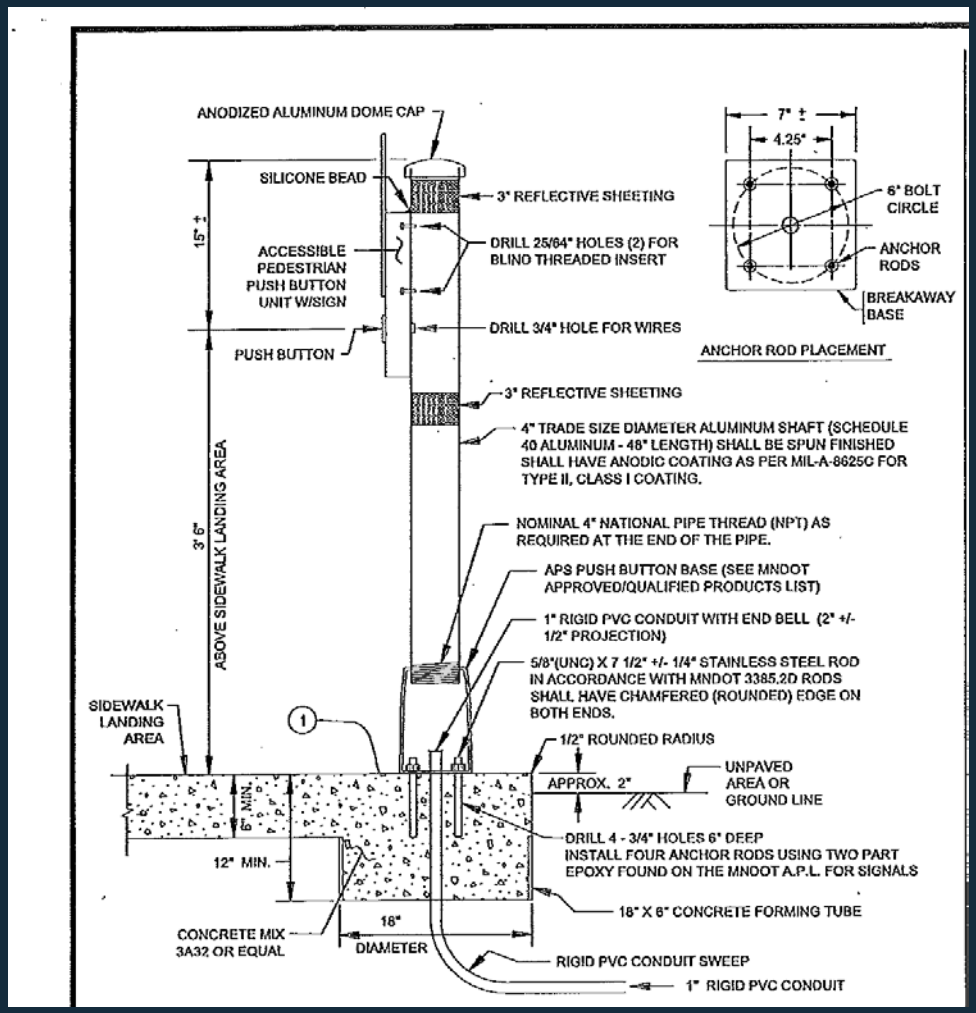
Crosswalks shall be striped in a straight at the outside edge of the detectable warnings.

(G) Pedestrian Signal Systems

The Contractor shall maintain all working points and use them for push button layout.

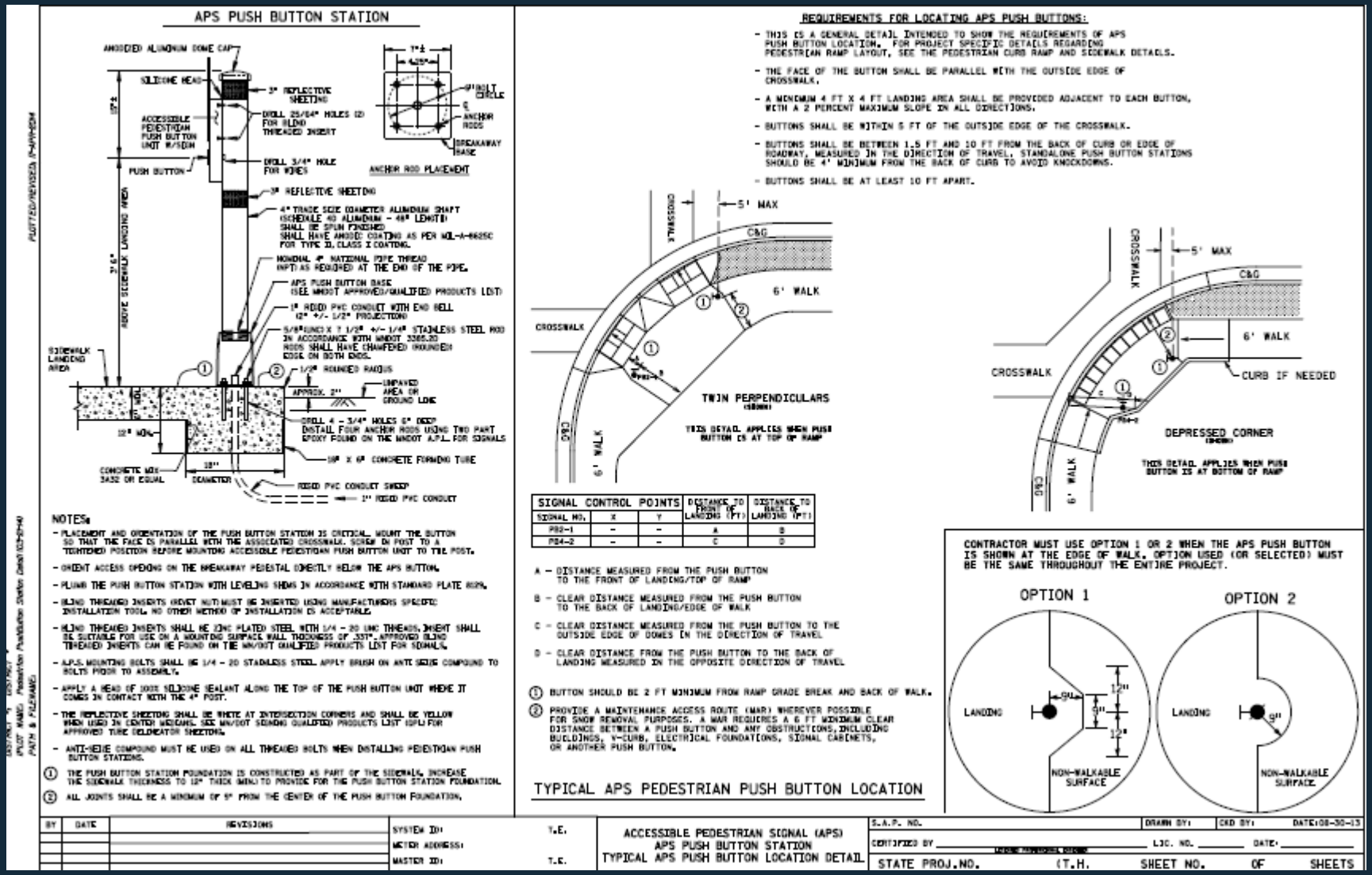
NEW for all APS 2014

New Breakaway Pedestal Base Push Button Station



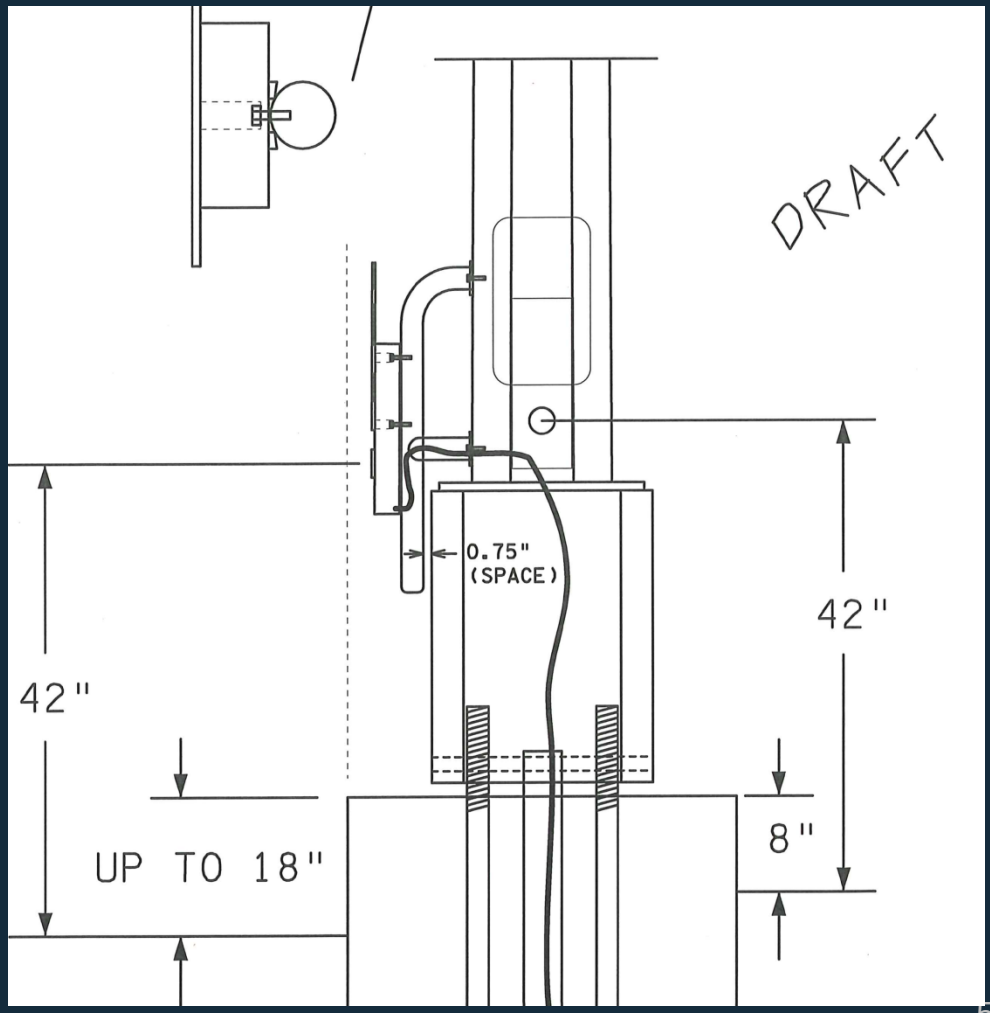
(G) Pedestrian Signal Systems

APS Push Button Station and Location



New for all APS 2014

New APS Signal Pole Bracket



Questions?

ADA Training

Your Destination...Our Priority