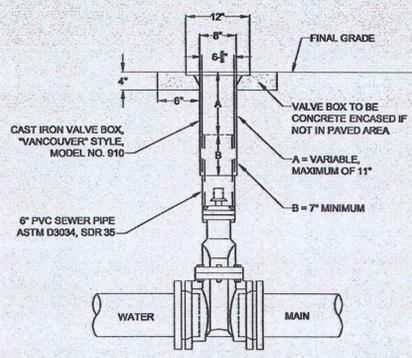


THIS DETAIL DRAWING SHALL NOT BE ALTERED OR CHANGED IN ANY MANNER EXCEPT BY THE CITY ENGINEER. IT IS THE RESPONSIBILITY OF THE USER TO ACQUIRE THE MOST CURRENT VERSION OF THE DETAIL.

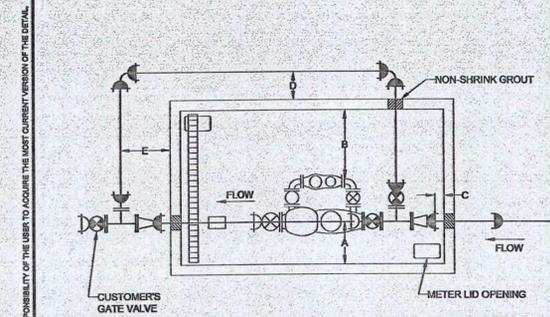


- NOTES:
1. VALVE BOXES SHALL BE CENTERED DIRECTLY OVER THE VALVE NUT IN A VERTICAL POSITION.
 2. VALVE BOX TOP SHALL BE ADJUSTED TO MEET FINISHED GRADE.
 3. PVC SHALL BE ONE CONTINUOUS PIECE-NO BELLS OR COUPLERS.
 4. ON VALVES 8" AND LARGER, PVC SHALL BE NOTCHED OVER VALVE PACKING BOLTS SO PVC SITS ON BONNET.

STANDARD VALVE BOX DETAIL

DATE: JULY 2008
DRAWING NO. WL-411
FILE NO.

1 VALVE BOX WL-411
P14.1|P15.2 SCALE: NONE



METER	4 x 2	6 x 3	8 x 4	3" COMPOUND
INCOMING LINE SIZE	6"	8"	10"	4"
BY-PASS LINE SIZE	4"	4"	6"	2" CU
UTILITY VAULT NO.	810-LA	712-LA	814-LA	687-LA
A	24"	18"	18"	24"
B	36"	36"	36"	24"
C	12"	12"	12"	12"
D	24"	24"	28"	24"
E	24"	28"	30"	24"

- MECHANICAL JOINT WITH MEGALUG RETAINER GLAND (1100 SERIES)
- PIPE BELL WITH MEGALUG HARNESS (1100HD SERIES)

STANDARD HERSEY MFM-MCT COMPOUND METER INSTALLATIONS
4x2, 6x3, 8x4, 3"

DATE: JULY 2008
DRAWING NO. WL-413A
FILE NO.

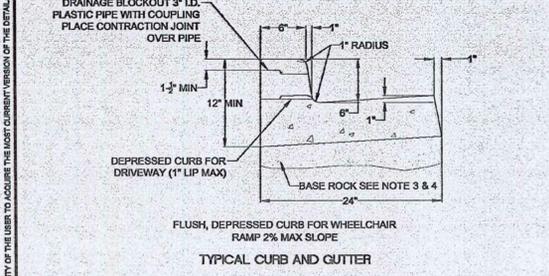
2 COMPOUND METER WL-413A & WL-413B
P14.1|P15.2 SCALE: NONE

- NOTES:
1. METER TO BE INSTALLED BY THE CITY AFTER PIPING IN VAULT HAS PASSED ALL TESTS.
 2. ALL VAULT WALL OPENINGS SHALL BE SEALED WITH NON-SHRINK GROUT.
 3. TOP OF VAULT SHALL BE A MINIMUM OF 12" ABOVE PROPOSED GRADE.
 4. INSTALL 4" DRAIN FROM VAULT TO DAYLIGHT OR STORM DRAIN WITH A BACKWATER CHECK VALVE ACCESSIBLE FROM VAULT. COORDINATE DRAINAGE SYSTEM WITH BACKFLOW DEVICE VAULT INSTALLATION.
 5. VAULT SHALL BE CLEAN AND FREE OF DEBRIS PRIOR TO METER INSTALLATION.
 6. ALL MECHANICAL JOINTS SHALL HAVE MEGALUG RESTRAINER GLANDS AS SHOWN.
 7. SERVICE LINE INTO VAULT SHALL HAVE A MINIMUM OF 40 FEET OF RESTRAINED JOINT PIPE BETWEEN DISTRIBUTION WATERLINE AND VAULT.
 8. SERVICE LINE INTO VAULT SHALL BE COMPLETELY BACKFILLED WITH SELECT BACKFILL BETWEEN DISTRIBUTION LINE AND VAULT.
 9. INSTALL A MINIMUM OF 3 PIPE SUPPORTS IN VAULT, GRINNELL NO. 264 OR ELSEN NO. 50.
 10. PIPE TO BE A MINIMUM OF 12" AND A MAXIMUM OF 48" ABOVE THE FLOOR OF THE VAULT.
 11. ONLY APPROVED RESILIENT SEAT GATE VALVES ARE ALLOWED.
 12. ALL VAULT DOORS TO BE UTILITY VAULT NO. 3-332P WITH 2 METER LID OPENINGS.
 13. VAULT SHALL BE EQUIPPED WITH AN APPROVED LADDER. IF VAULT DEPTH IS GREATER THAN 6 FT., AN APPROVED EXTENSION LADDER SHALL BE INSTALLED.
 14. PIPE BETWEEN THE TWO TEES SHALL BE ONE CONTINUOUS PIECE - NO JOINTS.
 15. ALL SERVICE PIPING WILL BE CHLORINATED AND TESTED TO CITY SPECIFICATIONS.

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STANDARD HERSEY MFM-MCT COMPOUND METER INSTALLATIONS
4x2, 6x3, 8x4, 3"

DATE: JULY 2008
DRAWING NO. WL-413B
FILE NO.

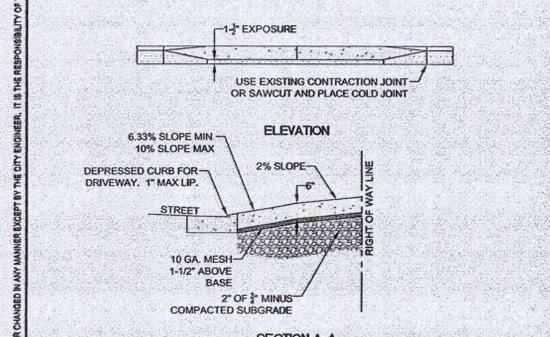
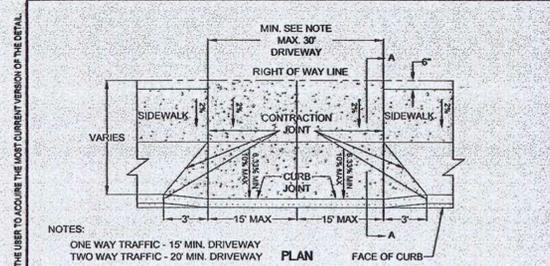


- NOTES:
1. CONCRETE SHALL HAVE A BREAKING STRENGTH OF 3000 PSI AFTER 28 DAYS.
 2. CONTRACTION JOINTS:
 - A) TO BE PROVIDED:
 - AT EACH POINT OF TANGENCY
 - AT EACH SIDE OF INLET STRUCTURES
 - AT BOTH SIDES OF AN APPROACH
 - B) SPACINGS TO BE NOT MORE THAN 15 FEET
 - C) THE DEPTH OF THE JOINT SHALL BE AT LEAST 1/3 OF THE THICKNESS OF CONCRETE
 - D) EXPANSION JOINTS SHALL NOT BE USED
 3. BASE ROCK - 1-1/2"-0", 95% COMPACTION PER AASHTO T-180 ROCK SHALL BE TO SUBGRADE OF THE STREET SECTION OR 4" IN DEPTH, WHICHEVER IS GREATER
 4. FULL DEPTH PREPARED ROCK SECTION SHALL EXTEND 4" HORIZONTALLY BEYOND BOTH SIDES OF CURB AND GUTTER
 5. DRAINAGE BLOCK - 3" DIA. PLASTIC PIPE
 - A) DRAINAGE ACCESS THROUGH EXISTING CURBS SHALL BE DONE BY:
 - CORE DRILLING
 - VERTICAL SAWCUT OF CURB 24" EACH SIDE OF DRAIN AND RE-POURED TO FULL DEPTH OF CURB
 6. STAMP TOP OF CURB WITH "W" AT WATER SERVICE CROSSING AND "S" AT SANITARY LATERAL CROSSING

TYPICAL CURBS

DATE: JULY 2008
DRAWING NO. WL-501
FILE NO.

3 STANDARD CURB WL-501
P13.1|P15.2 SCALE: NONE

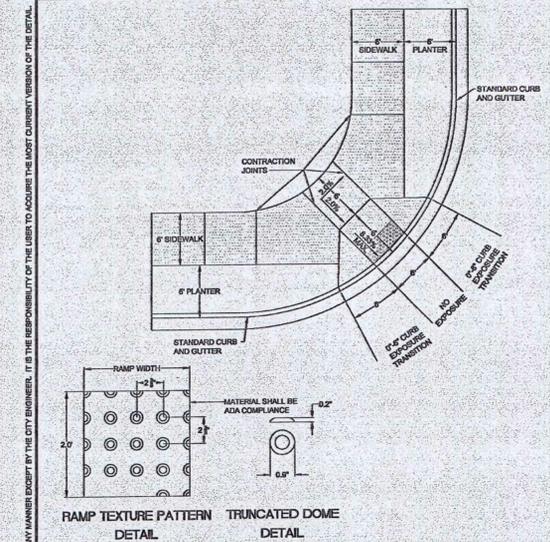


- NOTES:
1. CONCRETE SHALL HAVE A MINIMUM BREAKING STRENGTH OF 4000 PSI AFTER 28 DAYS, 6 SACK MIX
 2. CURB JOINT SHALL BE A TROWELED JOINT WITH A MIN. 1/2" RADIUS ALONG BACK OF CURB
 3. DRIVEWAY SHALL BE A MINIMUM 6" THICK
 4. DRIVEWAY CURB CUT SHALL COMPLY WITH THE CONDITIONS OF 5.0070, "WIDTH AND LOCATION OF CURB CUTS"

COMMERCIAL DRIVEWAY WITH SIDEWALK AWAY FROM CURB

DATE: JULY 2008
DRAWING NO. WL-504A
FILE NO.

4 COMMERCIAL DRIVEWAY WL-504A
P13.1|P15.2 SCALE: NONE

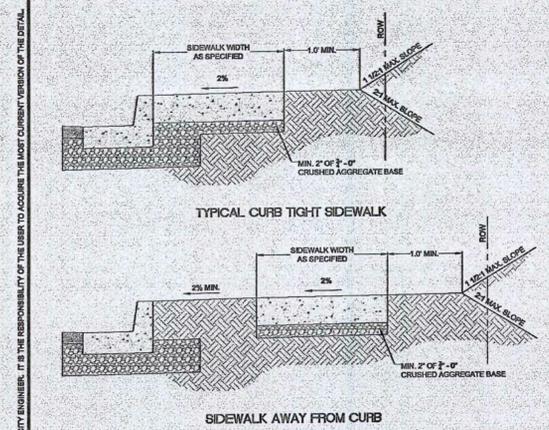


- NOTES:
1. LANDING AT TOP OF RAMP SHALL NOT EXCEED 2% IN ANY DIRECTION AND SHALL BE A MINIMUM OF 6' X 6'.
 2. RAMP CROSS SLOPE SHALL NOT EXCEED 2% (AS MEASURED PERPENDICULAR TO PEDESTRIAN TRAFFIC FLOW).
 3. TRUNCATED DOME MUST EXTEND THE FULL WIDTH OF THE RAMP AND COVER THE FIRST 2 FEET OF THE RAMP CLOSEST TO THE STREET.
 4. TRANSITIONS FROM THE RAMP TO THE SIDEWALK, GUTTER, AND STREET MUST BE FLUSH (LEVEL) AND FREE OF AIRPORT LEVEL CHANGES.
 5. THE GUTTER OR ADJACENT ROADWAY MUST HAVE A SLOPE OF NO MORE THAN 6 PERCENT (1:16) TOWARD THE RAMP.
 6. PLANED SIDES ("WINGS") OF THE CURB RAMP SHALL NOT EXCEED 10% IN SLOPE (0.33% IF PEDESTRIAN TRAVEL IS REQUIRED OVER THEM PER ADA STANDARDS - I.E. IF MINIMUM 4" W/4" FOR EXISTING SITES ONLY). LANDING IS NOT PROVIDED AT TOP OF RAMP.
 7. CONCRETE STRENGTH SHALL BE 3000 PSI.
 8. PLACE CONTRACTION JOINTS AS SHOWN ABOVE.
 9. NO ABOVE GROUND UTILITIES ARE PERMITTED WITHIN RAMP AREA.
 10. WHEN EITHER OPPOSING CURB RAMP HAS AN EXISTING IRWN RAMP, USE DETAIL WL-507B.

SINGLE CURB RAMP (ALLOWED WITH CITY ENGINEER APPROVAL ONLY)

DATE: JULY 2008
DRAWING NO. WL-507A
FILE NO.

5 ADA CURB RAMP WL-507A
P13.1|P15.2 SCALE: NONE

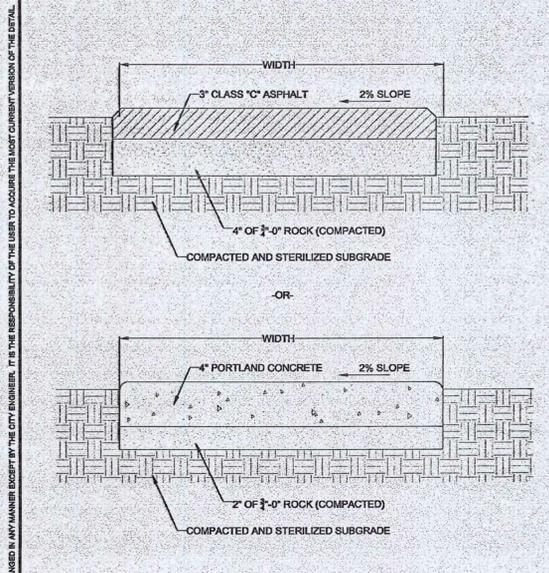


- NOTES:
1. CONCRETE SHALL BE 3000 PSI AT 28 DAYS.
 2. PANEL LENGTHS SHALL BE EQUAL TO THE SIDEWALK WIDTH, BUT MAY BE ADJUSTED WITH THE CITY ENGINEER'S APPROVAL.
 3. CONTRACTION JOINTS (1/3RD OF THE THICKNESS OF CONCRETE) SHALL BE PLACED EVERY THIRD PANEL WITH A MAX SPACING OF 15 FEET. JOINTS SHALL ALSO BE PLACED AT THE SIDES OF DRIVEWAY APPROACHES, UTILITY VAULTS, AND WHEELCHAIR RAMPS.
 4. A CURING COMPOUND SHALL BE USED. WHITE REFLECTIVE SHEETING SHALL BE USED IN CASE OF RAIN.
 5. FOR SIDEWALKS ADJACENT TO THE CURB AND POURED AT THE SAME TIME AS THE CURB, THE JOINT BETWEEN THEM SHALL BE A TROWELED JOINT WITH A MIN. 1/2" RADIUS.
 6. THE SIDEWALK SHALL HAVE A MIN. THICKNESS OF 6" IF THE SIDEWALK IS INTENDED AS A PORTION OF THE DRIVEWAY. OTHERWISE, THE SIDEWALK SHALL HAVE A MIN. THICKNESS OF 4".
 7. DRAIN BLOCKOUTS IN THE CURB SHALL BE EXTENDED TO THE BACK OF THE SIDEWALK WITH A 3" DIAMETER PLASTIC PIPE AT A 2% SLOPE. A CONTRACTION JOINT SHALL BE PLACED OVER THE PIPE.

CONCRETE SIDEWALK CROSS SECTION

DATE: JULY 2008
DRAWING NO. WL-508
FILE NO.

6 SIDEWALK WL-508
P13.1|P15.2 SCALE: NONE



- NOTES:
1. CONCRETE SHALL BE 3000 PSI AT 28 DAYS.
 2. SIDEWALK PANELS SHALL BE SQUARE, 3/4" DEEP SCRIBES AT JOINTS, EDGED (LE SHINE) ON 4 SIDES AND HAVE A LIGHT BROOM FINISH.
 3. PEDESTRIAN PATH OR BIKEWAY SHALL HAVE A MINIMUM WIDTH OF 6 FEET.

PEDESTRIAN PATH OR BIKEWAY

DATE: JULY 2008
DRAWING NO. WL-510
FILE NO.

7 ASPHALT PATH WL-510
P13.2|P15.2 SCALE: NONE

phase	CONSTRUCTION SET
date	April 6, 2011
revisions	

project # | 09014
CIVIL DETAILS