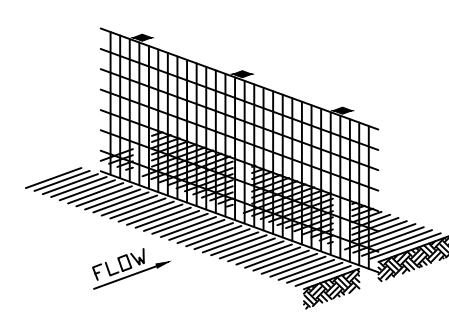
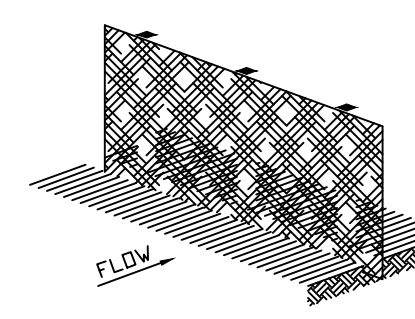




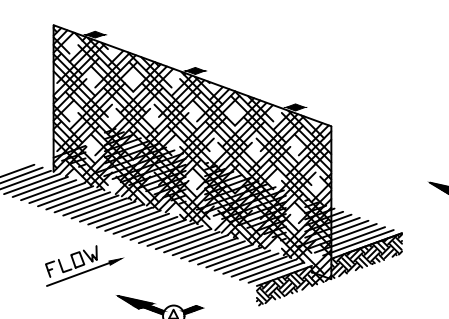
STEP 1:
SET POSTS AND EXCAVATE FOUR (4) INCH BY FOUR (4) INCH TRENCH UPSLOPE ALONG LINE OF POSTS (SEE NOTE 1).



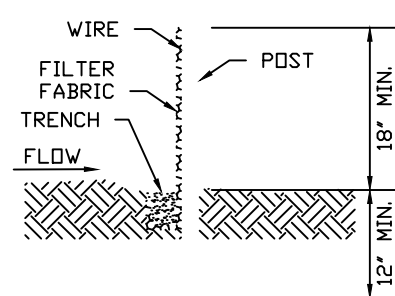
STEP 2:
SECURE WIRE FENCING TO POSTS (SEE NOTE 2).



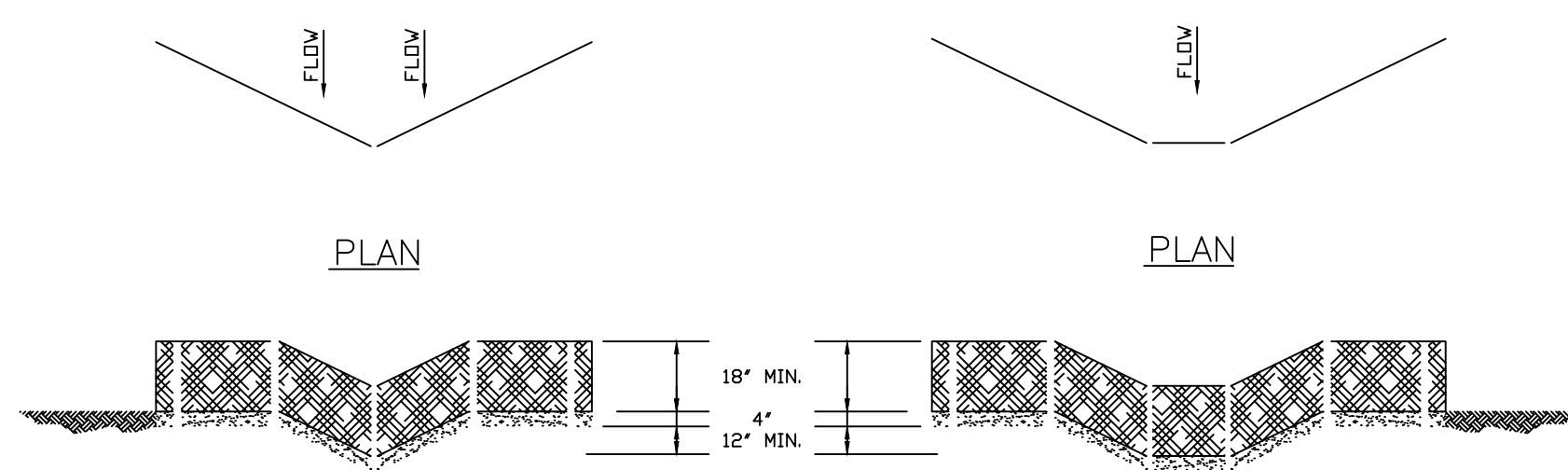
STEP 3:
ATTACH FILTER FABRIC MATERIAL TO WIRE FENCE AND EXTEND IT INTO TRENCH (SEE NOTE 3).



STEP 4:
BACKFILL AND COMPACT EXCAVATED SOIL (SEE NOTE 4).



SECTION "A" - "A"



V-BOTTOM DITCH PROFILE

FLAT BOTTOM DITCH PROFILE

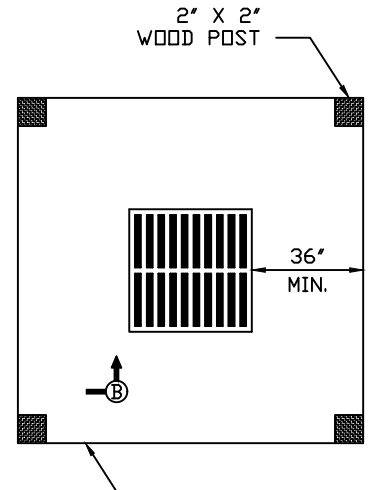
SILT FILTER FABRIC FENCE

NOTES:

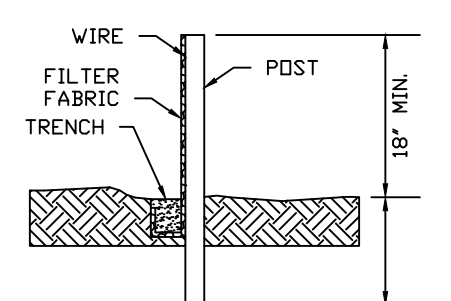
1. SET TWO (2) INCH BY TWO (2) INCH WOODEN STAKES EMBEDDED TWELVE (12) INCHES INTO GROUND. SPACING SHALL BE A MAXIMUM OF SIX (6) FEET APART FOR REINFORCED FILTER FABRIC FENCE AND A MAXIMUM OF THREE (3) FEET APART FOR NON-REINFORCED FILTER FABRIC FENCE.
2. REINFORCED FILTER FABRIC FENCE SHALL HAVE WOVEN WIRE FENCE WHICH SHALL BE FASTENED SECURELY TO FENCE POSTS.
3. FASTEN FILTER FABRIC FENCE AS FOLLOWS:
 - a. REINFORCED FILTER FABRIC FENCE SHALL BE SECURELY FASTENED TO WOVEN WIRE FENCE WITH TIES SPACED EVERY TWENTY-FOUR (24) INCHES AT TOP AND MIDSECTION.
 - b. NON-REINFORCED FILTER FABRIC FENCE SHALL BE FASTENED AT EVERY WOOD POST AT TOP AND MIDSECTION.
4. MINIMUM HEIGHT OF FILTER FABRIC SHALL BE EIGHTEEN (18) INCHES ABOVE NATURAL GROUND AND A MAXIMUM OF THIRTY-SIX (36) INCHES ABOVE NATURAL GROUND.
5. FILTER FABRIC SHALL EXTEND INTO THE FOUR (4) INCH BY FOUR (4) INCH TRENCH DOWN THE SIDE CLOSEST TO THE WOODEN POSTS, ACROSS THE BOTTOM OF THE TRENCH AND HALF WAY UP THE OPPOSITE SIDE.
6. ALL INSTALLATIONS OF SILT FENCE SHALL BE IN ACCORDANCE WITH THE CITY OF FRIENDSWOOD TECHNICAL SPECIFICATION SECTION 02005 - FILTER FABRIC SILT FENCE.
7. METAL STAKES OR T-POSTS MAY BE USED IN LIEU OF WOOD POSTS.

- SC - STABILIZED CONSTRUCTION EXIT
- FF - FILTER FABRIC SILT FENCE
- RFB - REINFORCED FILTER FABRIC BARRIER
- IPB-I - INLET PROTECTION BARRIER TYPE I
- IPB-II - INLET PROTECTION BARRIER TYPE II
- IPB-III - INLET PROTECTION BARRIER TYPE III
- LPIP - LOW PROFILE INLET PROTECTOR
- LPIGP - LOW PROFILE INLET GRATE PROTECTOR
- CW-A - CONCRETE WASHOUT AREA - ABOVE GROUND
- CW-B - CONCRETE WASHOUT AREA - BELOW GROUND

SWPPP SYMBOLS



PLAN

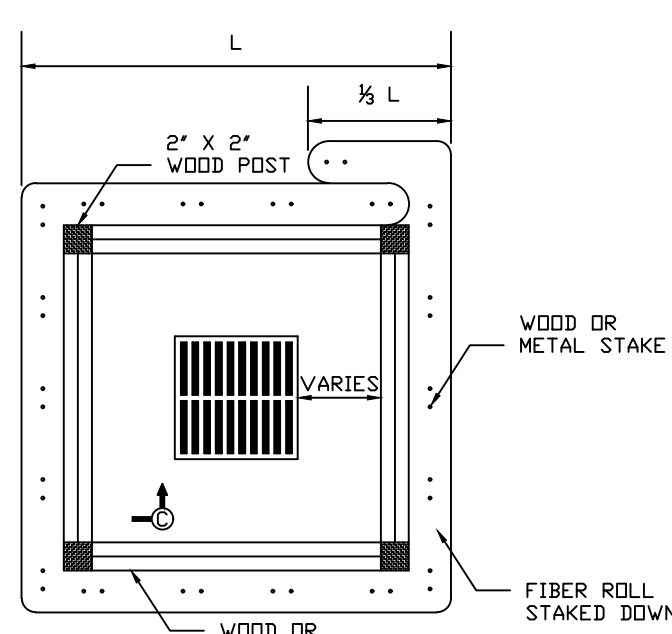


SECTION "B" - "B"

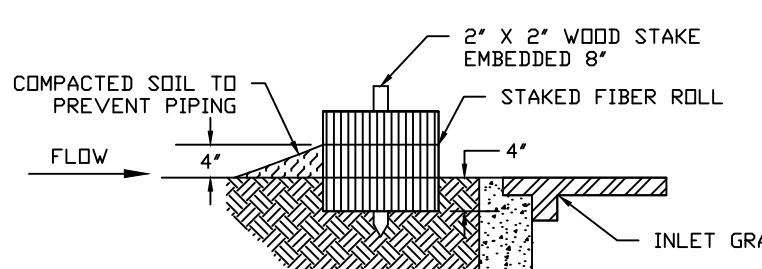
INLET PROTECTION TYPE I

NOTES:

1. MAXIMUM POST SPACING SHALL BE FOUR (4) FEET. ADDITIONAL POSTS MAY BE ADDED AS NEEDED. POSTS SHALL BE PLACED A MINIMUM AT EACH CORNER AS SHOWN.
2. PLACEMENT OF FILTER FABRIC BARRIER FROM INLET SHALL VARY ACCORDING TO SITE CONDITIONS. TYPICAL PLACEMENT SHALL BE A MINIMUM OF THIRTY-SIX (36) INCHES FROM INLET EDGE.



PLAN

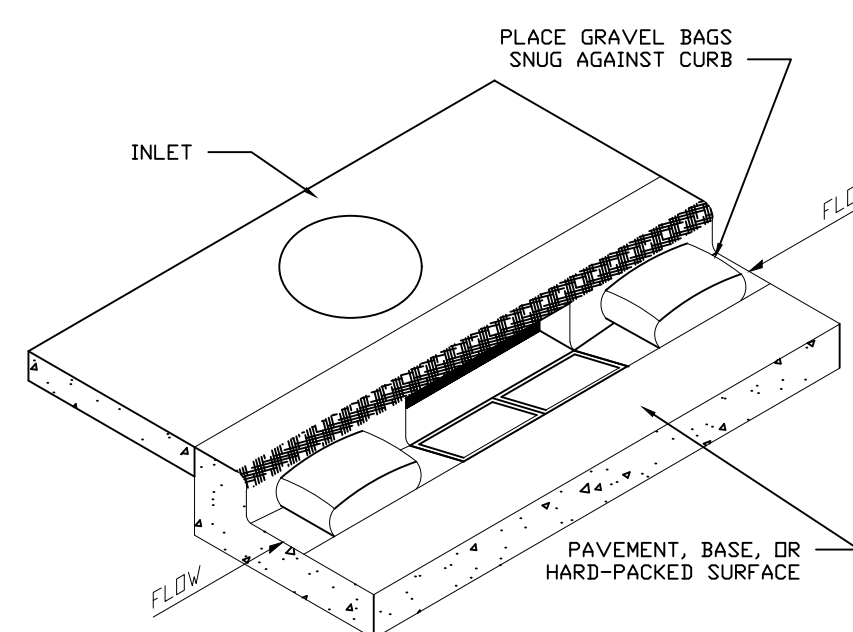


SECTION "C" - "C"

INLET PROTECTION TYPE II

NOTES:

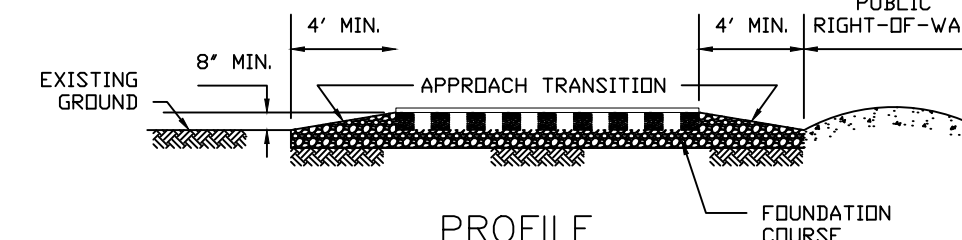
1. MAXIMUM POST SPACING SHALL BE FOUR (4) FEET. ADDITIONAL POSTS MAY BE ADDED AS NEEDED. POSTS SHALL BE PLACED A MINIMUM AT EACH CORNER AS SHOWN.
2. PLACEMENT OF FIBER ROLL FROM INLET SHALL VARY ACCORDING TO SITE CONDITIONS. TYPICAL PLACEMENT SHALL BE TWENTY-FOUR (24) INCHES FROM INLET.
3. FIBER ROLLS SHALL BE UTILIZED ONLY WHEN SITE CONDITIONS DO NOT PERMIT THE USE OF FILTER FABRIC BARRIER.
4. IF UNDERLYING MATERIAL IS BASE OR OTHER HARD-PACKED MATERIAL, THEN FIBER ROLLS MAY BE PLACED ON HARD PACKED SURFACE AND WEIGHTED DOWN WITH GRAVEL BAGS.



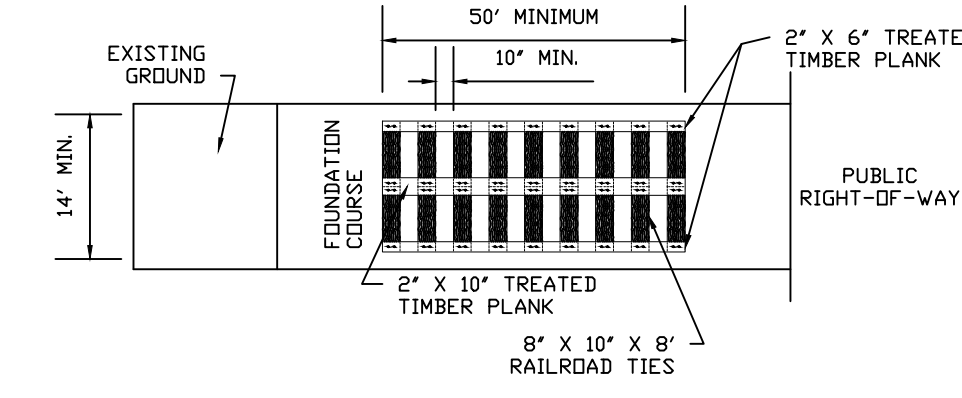
INLET PROTECTION BARRIER TYPE III

NOTES:

1. IPB TYPE III SHALL BE USED FOR EXISTING OR PROPOSED STAGE II TYPE "B", "B-B" AND "H-2" INLETS ONLY.
2. PLACE GRAVEL BAG IN THE GUTTER ON EACH SIDE OF THE INLET OPENING. GRAVEL BAG SHALL BE PLACED TIGHTLY AGAINST THE FACE OF CURB.
3. PLACE GRAVEL BAGS AT BACK OF CURB ALONG INLET.
4. DO NOT PLACE BAGS TO BLOCK THROAT OF INLET, UNLESS DIRECTED BY THE ENGINEER AND APPROVED BY THE CITY OF FRIENDSWOOD.



PROFILE

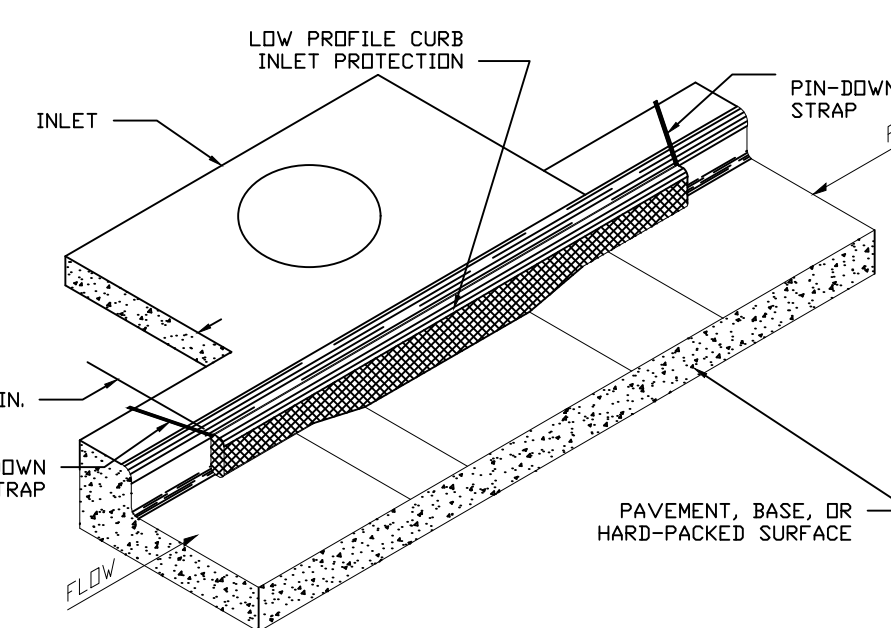


PLAN

CONSTRUCTION ACCESS TYPE I

NOTES:

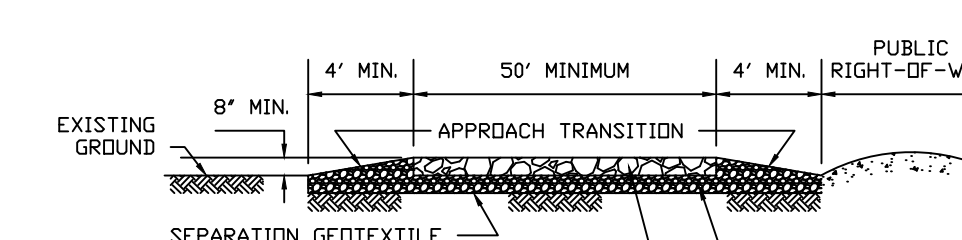
1. LENGTH SHALL BE AS SHOWN ON THE CONSTRUCTION DRAWINGS, BUT NOT LESS THAN FIFTY (50) FEET.
2. THICKNESS SHALL BE A MINIMUM OF EIGHT (8) INCHES.
3. WIDTH SHALL BE NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS AND EGRESS.
4. THE TREATED TIMBER PLANKS SHALL BE #2 GRADE MINIMUM AND SHOULD BE FREE FROM LARGE AND LOOSE KNOTS.
5. THE TREATED TIMBER PLANKS SHALL BE ATTACHED TO THE RAILROAD TIES WITH 3/4" X 6" MINIMUM LAG BOLTS. OTHER FASTENERS MAY BE USED AS APPROVED BY THE CITY.
6. APPROACH TRANSITION SHALL BE A MINIMUM OF EIGHT (8) INCHES IN DEPTH AND 6:1 SLOPE MINIMUM.
7. FOUNDATION COURSE SHALL BE A MINIMUM OF SIX (6) INCHES. FOUNDATION COURSE MATERIAL SHALL BE FLEXIBLE BASE, BITUMINOUS CONCRETE, PORTLAND CEMENT CONCRETE OR OTHER MATERIAL APPROVED BY THE CITY.
8. ACCESS SHALL BE GRADED TO PREVENT RUN-OFF FROM LEAVING SITE, ALLOWING DRAINAGE TO A SEDIMENT TRAPPING DEVICE.
9. CONSTRUCTION ACCESS SHALL ADHERE TO CITY OF FRIENDSWOOD SPECIFICATION 02020 - STABILIZED CONSTRUCTION ACCESS, ROADS, PARKING AND WASH AREAS.
10. STABILIZATION FOR OTHER AREAS SHALL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION ACCESS, UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION DRAWINGS.
11. STABILIZED AREA MAY BE WIDENED OR LENGTHENED TO ACCOMMODATE TRUCK WASHING AREA. AN OUTLET SEDIMENT TRAP MUST BE PROVIDED FOR TRUCK WASHING AREA.
12. STABILIZED CONSTRUCTION ACCESS SHALL BE MAINTAINED FREE OF SEDIMENT FOR THE DURATION OF THE PROJECT.



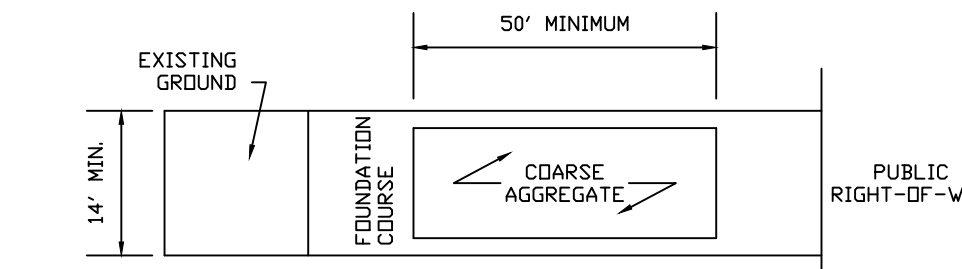
LOW PROFILE INLET PROTECTOR

NOTES:

1. LPIP SHALL BE REQUIRED IN HIGH TRAFFIC VOLUME ROADWAYS.
2. LPIP SHALL BE USED FOR EXISTING OR PROPOSED STAGE II TYPE "H-2" INLETS ONLY.
3. LPIP SHALL EXTEND A MINIMUM OF TWELVE (12) INCHES PAST THE THROAT OPENING OF THE INLET.
4. LPIP SHALL BE FINED DOWN BEHIND THE CURB AS SHOWN.
5. ONLY GUTTER GATOR™ OR GUTTER GUARD™ SHALL BE USED, UNLESS PREVIOUSLY APPROVED BY THE CITY ENGINEER.



PROFILE

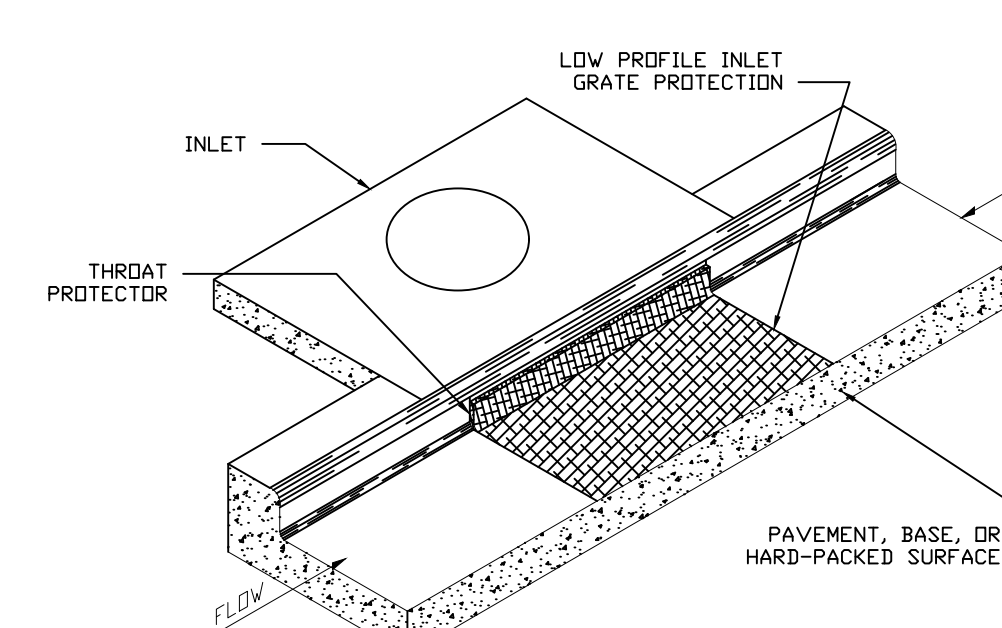


PLAN

CONSTRUCTION ACCESS TYPE II

NOTES:

1. LENGTH SHALL BE AS SHOWN ON THE CONSTRUCTION DRAWINGS, BUT NOT LESS THAN FIFTY (50) FEET.
2. THICKNESS SHALL BE A MINIMUM OF EIGHT (8) INCHES.
3. WIDTH SHALL BE NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS AND EGRESS.
4. APPROACH TRANSITION SHALL BE A MINIMUM OF EIGHT (8) INCHES IN DEPTH AND 6:1 SLOPE MINIMUM.
5. FOUNDATION COURSE SHALL BE A MINIMUM OF SIX (6) INCHES. FOUNDATION COURSE MATERIAL SHALL BE FLEXIBLE BASE, BITUMINOUS CONCRETE, PORTLAND CEMENT CONCRETE OR OTHER MATERIAL APPROVED BY THE CITY.
6. ACCESS SHALL BE GRADED TO PREVENT RUN-OFF FROM LEAVING SITE.
7. CONSTRUCTION ACCESS SHALL ADHERE TO CITY OF FRIENDSWOOD SPECIFICATION 02020 - STABILIZED CONSTRUCTION ACCESS, ROADS, PARKING AND WASH AREAS.
8. STABILIZATION FOR OTHER AREAS SHALL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION ACCESS, UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION DRAWINGS.
9. STABILIZED AREA MAY BE WIDENED OR LENGTHENED TO ACCOMMODATE TRUCK WASHING AREA. AN OUTLET SEDIMENT TRAP MUST BE PROVIDED FOR TRUCK WASHING AREA.
10. STABILIZED CONSTRUCTION ACCESS SHALL BE MAINTAINED FREE OF SEDIMENT FOR THE DURATION OF THE PROJECT.



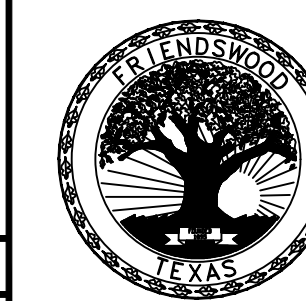
LOW PROFILE INLET GRATE PROTECTOR

NOTES:

1. LPIGP SHALL BE REQUIRED IN HIGH TRAFFIC VOLUME ROADWAYS.
2. LPIGP SHALL BE USED FOR EXISTING OR PROPOSED STAGE II TYPE "B" AND "B-B" INLETS ONLY.
3. THROAT PROTECTION SHALL BE A MINIMUM OF 4" IN HEIGHT.
4. ONLY GRATE GATOR™ OR INLET GUARD™ PLUS® SHALL BE USED, UNLESS PREVIOUSLY APPROVED BY THE CITY ENGINEER.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) STANDARD DETAILS

FILE NAME: SW3PSD1 - 2019.DWG DATE APPROVED: JULY 1, 2017
SCALE: NTS REVISED DATE: JUNE 2019



DEPARTMENT OF ENGINEERING & PROJECTS

PROJECT NUMBER: DATE SUBMITTED: SHEET: XX OF XX