

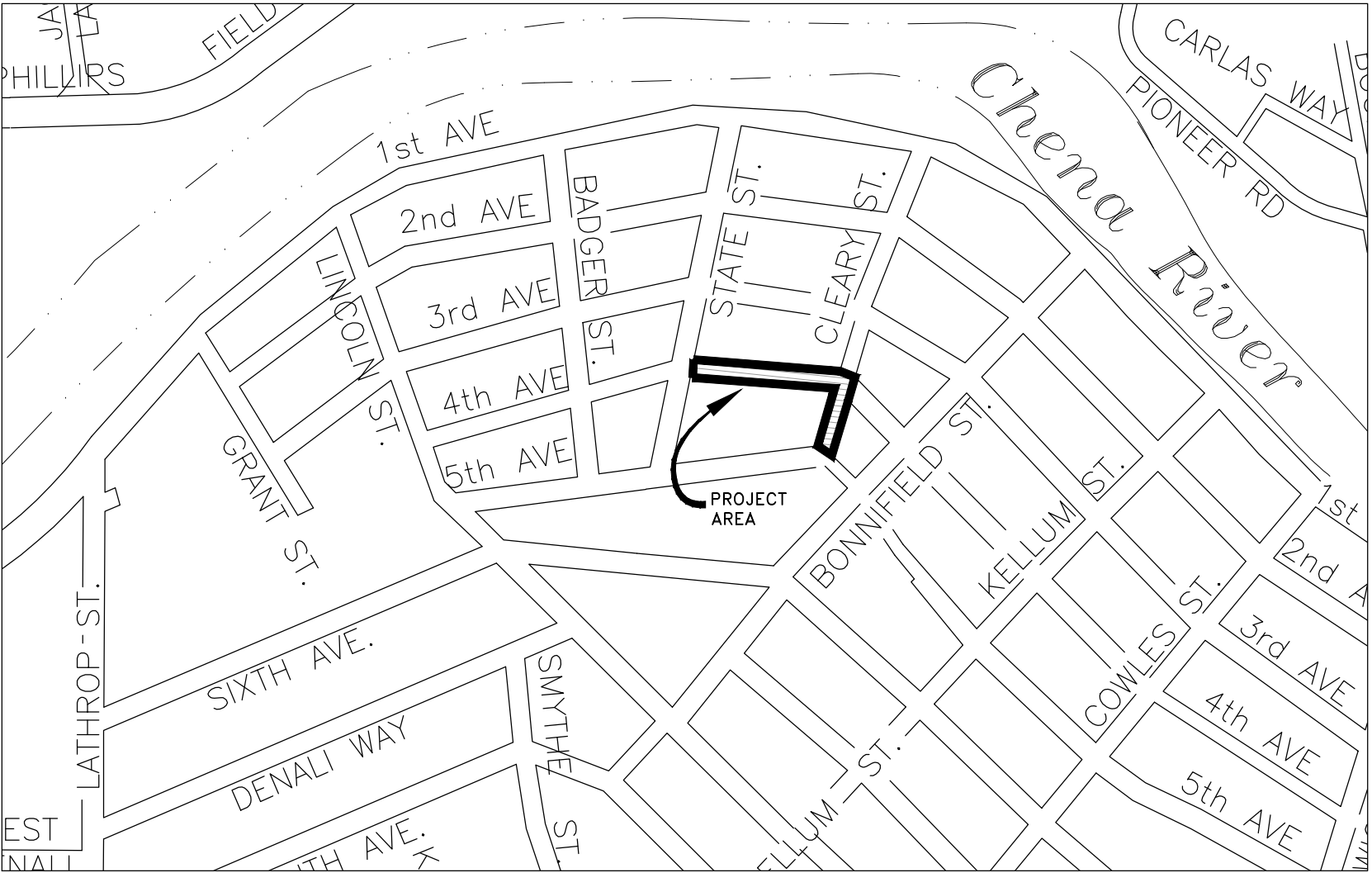
CITY OF FAIRBANKS

PROPOSED UTILITY PROJECT

ITB-25-02

4TH & STATE STORM DRAIN EXTENSION PROJECT

| INDEX OF SHEETS |  |
|-----------------|--|
| SHEET NO.       | DESCRIPTION                                      |
| 1.01            | TITLE SHEET                                      |
| 1.02            | QUANTITIES AND GENERAL NOTES                     |
| 1.03 – 1.04     | SURVEY CONTROL                                   |
| 2.01            | TYPICAL SECTION                                  |
| 3.01 – 3.03     | PLAN & PROFILE                                   |
| 4.01            | EROSION & SEDIMENT CONTROL PLAN                  |
| 5.01            | TRAFFIC CONTROL PLAN                             |
| SD1 – SD2       | CITY OF FAIRBANKS STANDARD DETAILS – STORM DRAIN |



VICINITY MAP

|      |          |    |
|------|----------|----|
|      |          |    |
|      |          |    |
|      |          |    |
| DATE | REVISION | BY |

|             |
|-------------|
| SCALE: NONE |
|             |
|             |

|                   |
|-------------------|
| DESIGNED: RHP/KLL |
| DRAWN:            |
| CHECKED: RHP      |
| DATE: 06/20/24    |

|               |
|---------------|
| APPROVED      |
|               |
| CITY ENGINEER |
| DATE          |



4TH & STATE STORM DRAIN EXTENSION PROJECT

CITY OF FAIRBANKS, ALASKA  
Engineering Department  
Project ITB-25-02

1.01  
OF 12 SHEETS

| ESTIMATE OF QUANTITIES |  |                |              |
|------------------------|--|----------------|--------------|
| ITEM NO.               | PAY ITEM                               | PAY UNIT       | QUANTITY     |
| 202.0001.0000          | REMOVAL OF STRUCTURES AND OBSTRUCTIONS | LUMP SUM       | ALL REQUIRED |
| 203.0003.0000          | UNCLASSIFIED EXCAVATION                | CUBIC YARD     | 220          |
| 301.0001.00D1          | AGGREGATE BASE COURSE, GRADING D-1     | TON            | 410          |
| 308.0001.0000          | CRUSHED ASPHALT BASE COURSE            | SQUARE YARD    | 450          |
| 401.0001.002B          | HMA, TYPE II; CLASS B                  | TON            | 215          |
| 401.0004.0000          | ASPHALT BINDER, GRADE PG 52E-40        | TON            | 12           |
| 603.0021.0008          | CORRUGATED POLYETHYLENE PIPE 8 INCH    | LINEAR FOOT    | 30           |
| 603.0021.0012          | CORRUGATED POLYETHYLENE PIPE 12 INCH   | LINEAR FOOT    | 650          |
| 604.0004.0000          | ADJUST EXISTING MANHOLE                | EACH           | 3            |
| 604.0005.000A          | INLET, TYPE A                          | EACH           | 9            |
| 604.0010.0000          | RECONSTRUCT INLET                      | EACH           | 1            |
| 640.0001.0000          | MOBILIZATION AND DEMOBILIZATION        | LUMP SUM       | ALL REQUIRED |
| 641.2000.0000          | POLLUTION CONTROL                      | LUMP SUM       | ALL REQUIRED |
| 642.0001.0000          | CONSTRUCTION SURVEYING                 | LUMP SUM       | ALL REQUIRED |
| 643.0013.0000          | THREE PERSON SURVEY PARTY              | CONTINGENT SUM | ALL REQUIRED |
| 643.0002.0000          | TRAFFIC MAINTENANCE                    | LUMP SUM       | ALL REQUIRED |

| ESTIMATING FACTORS |                                    |                              |
|--------------------|------------------------------------|------------------------------|
| ITEM NO.           | PAY ITEM                           | FACTOR                       |
| 301.0001.00D1      | AGGREGATE BASE COURSE, GRADING D-1 | 145 LB / CF                  |
| 401.0001.002B      | HMA, TYPE II; CLASS B              | 150 LB / CF                  |
| 401.0004.0000      | ASPHALT BINDER, GRADE PG 52E-40    | 5.5% WEIGHT OF 401.0001.002B |

GENERAL NOTES

1. GRADES, ALIGNMENTS, APPROACH LOCATIONS, LENGTHS AND LOCATIONS OF CONDUIT RUNS SHOWN ON THESE PLANS ARE SUBJECT TO MINOR REVISIONS BY THE ENGINEER. ALL DISTANCES SHOWN IN THE PLANS ARE HORIZONTAL MEASUREMENTS.
2. SAWCUT ALL MATCH LINES WHERE NEW CONSTRUCTION OF PAVEMENT, SIDEWALK OR CURBING ABUTS EXISTING. SAWCUTS SUBSIDIARY TO RESPECTIVE PAY ITEMS.
3. APPLY WATER FOR DUST CONTROL DAILY OR AS DIRECTED BY THE ENGINEER. PAY SUBSIDIARY TO PAY ITEM 643.0002.0000 TRAFFIC MAINTENANCE.
4. PAYMENT FOR PAY ITEM 202.0001.0000 REMOVAL OF STRUCTURES AND OBSTRUCTIONS SHALL BE A LUMP SUM PAYMENT FOR REMOVING ALL ITEMS IN CONFLICT WITH THE IMPROVEMENTS. THESE ITEMS ARE NOT LISTED. IT IS THE CONTRACTORS RESPONSIBILITY TO FIELD VERIFY THE NATURE OF THIS WORK BEFORE BIDDING.
5. ALL PAYMENTS REQUESTED BY THE CONTRACTOR SHALL BE DEVELOPED BY THE CONTRACTOR IN A FORM ACCEPTABLE TO THE ENGINEER. PAY ESTIMATES SHALL BE SUBMITTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
6. CONTRACTOR IS RESPONSIBLE FOR PROVIDING THEIR OWN STAGING AREA.
7. NUMEROUS UNDERGROUND UTILITIES EXIST WITHIN THE PROJECT CORRIDOR. THE CONTRACTOR SHALL CONTACT UTILITY OWNERS AND GET LOCATES PRIOR TO EXCAVATION.
8. PRESERVE AND PROTECT EXISTING LANDSCAPE AND FENCING IN PLACE. SUBSIDIARY TO PAY ITEM 202.0001.0000.

ABBREVIATIONS

- ABD – ABANDONED

AC – ASPHALT CONCRETE

AP – ANGLE POINT

ABC – AGGREGATE

BASE COURSE

BK SDWK – BACK OF SIDEWALK

BLDG – BUILDING

BL – BASELINE

BOP – BEGINNING OF PROJECT

BV – BUTTERFLY VALVE

C – CONDENSATE

CB – CATCH BASIN

CC – CURB CUT

CI – CAST IRON

CL – CENTER LINE

CONC – CONCRETE

CS – CONDENSATE SERVICE

CSP – CORRUGATED STEEL PIPE

D – DUCT BANK

DIP – DUCTILE IRON PIPE

DL – DITCH LINE

DG – DOWN GUY

DW – DRIVEWAY

E – EAST

e – SUPERELEVATION

EA – EACH

ELEV – ELEVATION

EOP – END OF PROJECT

EP – EDGE OF PAVEMENT

ES – END SECTION

EXIST – EXISTING

FG – FINISH GRADE

FH – FIRE HYDRANT

FL – FLOW LINE

FLG – FLANGE

FOC – FACE OF CURB

FRM – FRAME

FW – FLUSHWELL

G – GUTTER

GP – GRADE POINT

GRP– GUARD POST

GR – GRADE

GRT – GRATE

GV – GATE VALVE

HB – HORIZONTAL BEND

HDPE – HIGH DENSITY POLYETHYLENE

HPS – HIGH PRESSURE SODIUM LUMINAIRE

HWR – HOT WATER RETURN

HWS – HOT WATER SUPPLY

HWSS – HOT WATER SERVICE SUPPLY

ID – INSIDE DIAMETER

IE – INVERT ELEVATION

INS – INSULATION

L – LENGTH OF CURVE

LTDL – LEFT DITCH LINE

LT – LEFT

LF – LINEAL FEET

MAX – MAXIMUM

MB – MAILBOX

MH – MANHOLE

MIN – MINIMUM

MON – MONUMENT

MV – MERCURY VAPOR LUMINAIRE
- NC – NORMALLY CLOSED

NE – NORTHEAST

NW – NORTHWEST

N – NORTH

N.I.C. – NOT IN CONTRACT

OD – OUTSIDE DIAMETER

OG – ORIGINAL GROUND

PC – POINT OF CURVATURE

PCC – POINT OF COMPOUND CURVE

PI – POINT OF INTERSECTION

PIV – POST INDICATOR VALVE

PL – PROPERTY LINE

POT – POINT ON TANGENT

PRC – PROPERTY CORNER

PP – POWER POLE

PT – POINT OF TANGENCY

PLVC – POLYVINYL CHLORIDE

PUE – PERMANENT UTILITY EASEMENT

PVC – POINT OF VERTICAL CURVATURE

PVI – POINT OF VERTICAL INTERSECTION

PVMT – PAVEMENT

PVT – POINT OF VERTICAL TANGENCY

R – RADIUS

RTDL – RIGHT DITCH LINE

RMC – RIGID METAL CONDUIT

ROW – RIGHT OF WAY

R&R – REMOVE AND REPLACE

RT – RIGHT

RPM – REINFORCED PLASTIC MORTAR

SMTA – SELECTED MATERIAL TYPE A

s – SLOPE

S – SOUTH

SE – SOUTHEAST

SM – SEWER MAIN

SMH – SEWER MANHOLE

SMHS– SEWER MANHOLES

SCH – SCHEDULE

SD – STORM DRAIN

SI – STREET INTERSECTION

SL – STREET LIGHT

SP – STEEL PIPE

SS – SEWER SERVICE

ST – STEAM

STA – STATION

STS – STEAM SERVICE

SW – SOUTHWEST

T – TELEPHONE

TC –TOP OF CURB

TCP– TEMP. CONSTRUCTION PERMIT

TOC – TOP OF CONDUIT

TOP – TOP OF PIPE

TYP– TYPICAL

UG – UNDERGROUND

VB – VALVE BOX

W – WEST

WM – WATER MAIN


WS – WATER SERVICE

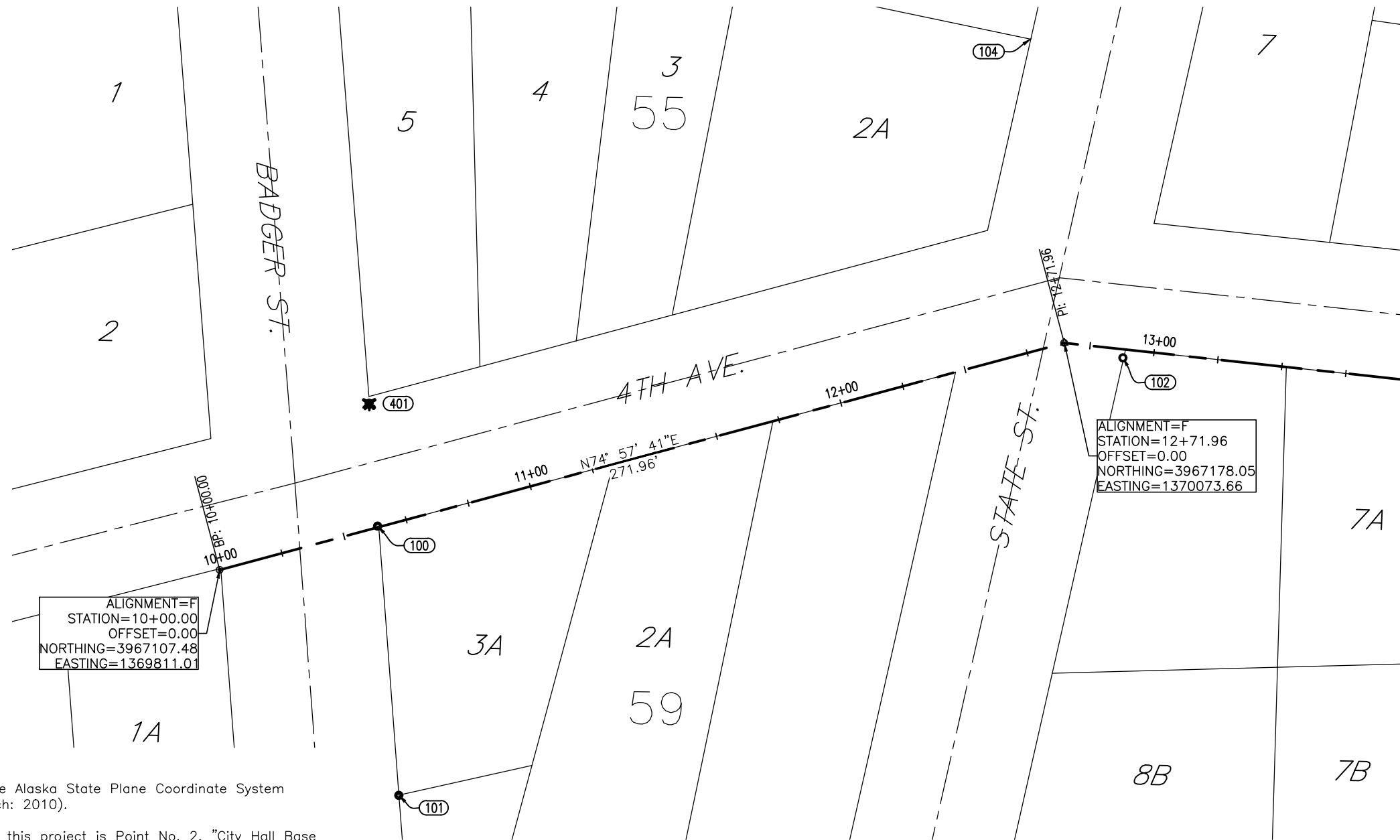
WSP – WOOD STAVE PIPE

GENERAL NOTES, ABBREVIATIONS,  
AND ESTIMATE OF QUANTITIES



02/21/2025

|      |          |    |             |                   |          |   |  |  |                 |
|------|----------|----|-------------|-------------------|----------|---|--|--|-----------------|
|      |          |    | SCALE: NONE | DESIGNED: RHP/KLL | APPROVED |  | <b>4TH &amp; STATE STORM<br/>DRAIN EXTENSION PROJECT</b> | CITY OF FAIRBANKS, ALASKA<br>Engineering Department<br><br>Project ITB-25-02 | 1.02            |
|      |          |    |             | DRAWN:            |          |   |  |  | OF 12<br>SHEETS |
|      |          |    |             | CHECKED: RHP      |          |   |  |  |                 |
| DATE | REVISION | BY |             | DATE: 06/20/24    | DATE     |   |  |  |                 |



1"=20' HORIZ.,  
(FULL SIZE)  
1"=40' HORIZ.,  
(HALF SIZE)

- LEGEND:
- REBAR FOUND
  - IRON PIPE
  - HYDRANT

CONTROL NOTES

Coordinates shown hereon are Alaska State Plane Coordinate System Zone 3, NAD83 (2011) (Epoch: 2010).

The Basis of Coordinates for this project is Point No. 2, "City Hall Base Station 2," a Trimble Zephyr 3 Geodetic Antenna on the roof of Fairbanks City Hall. The NAD83 (2011) (Epoch 2010) position for Point No. 2 is based on the results obtained from static GPS observations sent to the NGS OPUS utility for processing.

NAD83 (2011) (Epoch: 2010)  
Latitude 64° 50'23.61722" North, Longitude 147°43'16.35657" West

Alaska State Plane Zone 3 Coordinates (US Survey Feet)  
North 3965091.405 usft, East 1372475.351 usft  
Orthometric Height: 515.794, Geoid 12B Alaska

Project bearings are Alaska State Plane Zone 3 bearings.

ROW lines shown were determined by City of Fairbanks (William Irving, PLS 13315,) and are based the Theile Plat of 1922, and the unrecorded Beck Maps of 1954 using best fit lines between existing monuments.

The basis of vertical control is the NGS benchmark "P-5", point # 2 elev, 446.65' NAVD 88; PID: TT2861. TBMs on site established using differential levels to fire hydrant "x" bolts.

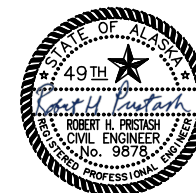
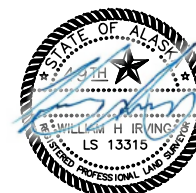
HORIZONTAL CONTROL

| POINT # | NORTHING   | EASTING    | ELEVATION | DESCRIPTION            |
|---------|------------|------------|-----------|------------------------|
| 100     | 3967121.03 | 1369860.11 | 440.8     | IPF NW BL59            |
| 101     | 3967037.33 | 1369866.74 | 440.1     | IPF SW L3A B59         |
| 102     | 3967173.38 | 1370091.91 | 440.8     | RBF NWCOR B60          |
| 103     | 3967351.04 | 1370081.00 | 440.9     | FIP NE BLK 55          |
| 104     | 3967272.56 | 1370063.20 | 440.9     | RBCF 3TIER L2A/L1A B55 |
| 107     | 3967327.90 | 1369819.31 | 439.3     | SI 3RD BADGER          |

VERTICAL CONTROL

| POINT # | NORTHING | EASTING | ELEVATION | DESCRIPTION      |
|---------|----------|---------|-----------|------------------|
| 401     | 3967159  | 1369861 | 442.67    | TBM 4TH & BADGER |
| 402     | 3967399  | 1370144 | 442.87    | TBM 3RD & STATE  |
| 403     | 3966974  | 1370418 | 441.48    | TBM 5TH & CLEARY |

SURVEY CONTROL



02/21/2025

SCALE:

DESIGNED: RHP/KLL

APPROVED

DRAWN:

CITY ENGINEER

CHECKED: RHP

DATE: 06/20/24

DATE



4TH & STATE STORM  
DRAIN EXTENSION PROJECT

CITY OF FAIRBANKS, ALASKA  
Engineering Department

Project ITB-25-02

1.03

OF 12  
SHEETS

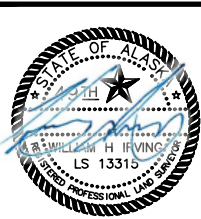


1"=20' HORIZ.,  
(FULL SIZE)  
1"=40' HORIZ.,  
(HALF SIZE)

- LEGEND:
- REBAR FOUND
  - IRON PIPE
  - ⛶ HYDRANT

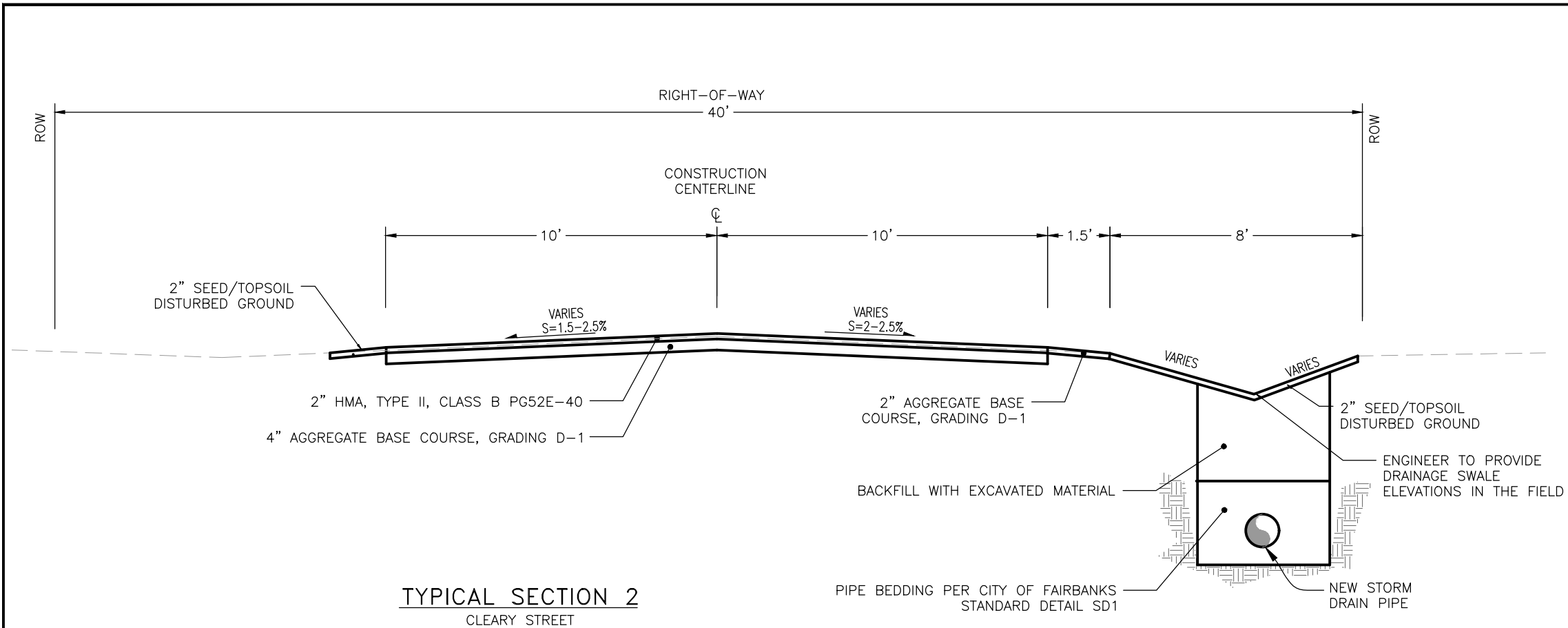
| HORIZONTAL CONTROL |            |            |           |                   |
|--------------------|------------|------------|-----------|-------------------|
| POINT #            | NORTHING   | EASTING    | ELEVATION | DESCRIPTION       |
| 106                | 3967317.82 | 1370486.87 | 439.8     | SI 3RD CLEARY     |
| 110                | 3966984.08 | 1370396.80 | 438.1     | SI 5TH CLEARY     |
| 113                | 3967156.36 | 1370736.72 | 440.1     | SI 3RD BONN       |
| 114                | 3967272.24 | 1370511.60 | 441.4     | IPF SE 3RD CLEARY |
| 115                | 3967162.73 | 1370476.03 | 440.4     | IPF NE 4TH CLEARY |

SURVEY CONTROL



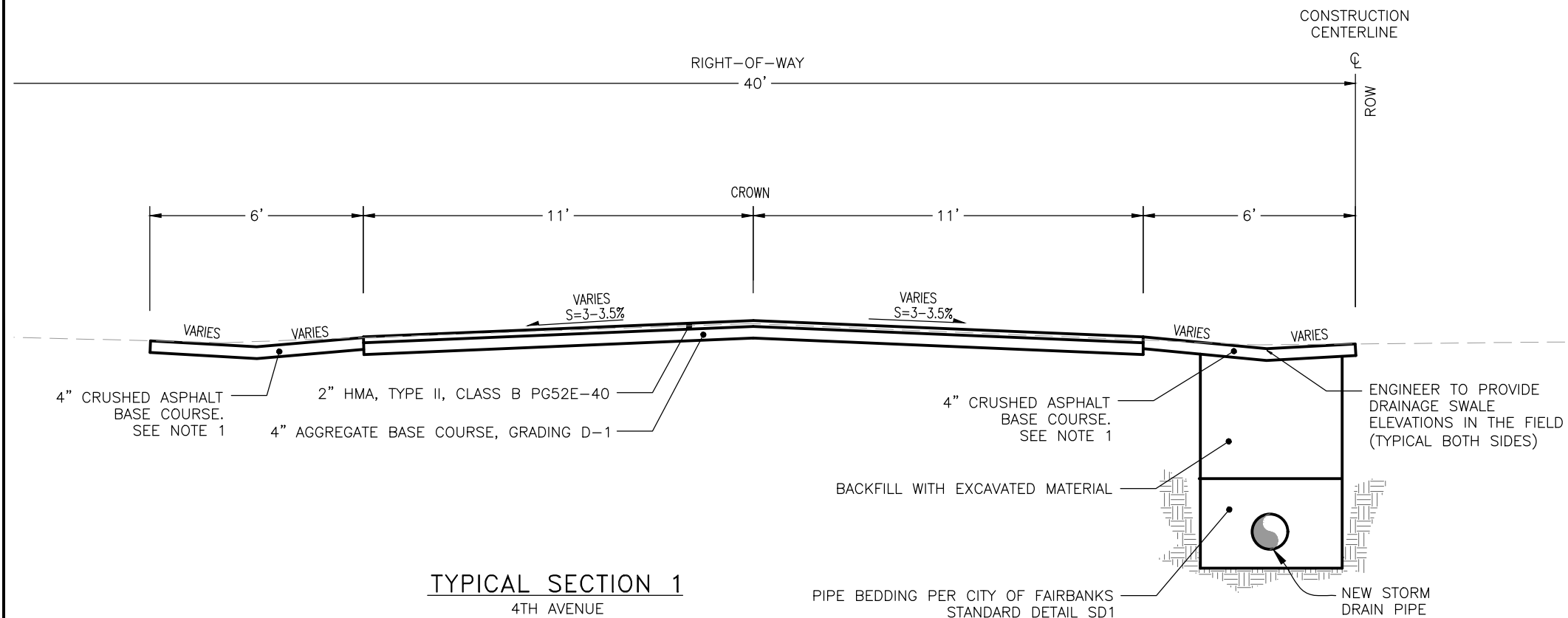
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|      |          |    | SCALE: | DESIGNED: RHP/KLL | APPROVED<br><br>CITY ENGINEER |  | 4TH & STATE STORM<br>DRAIN EXTENSION PROJECT | CITY OF FAIRBANKS, ALASKA<br>Engineering Department<br>Project ITB-25-02 | 1.04<br>OF 12<br>SHEETS |
|      |          |    |        | DRAWN:            |                               |  |  |  |                         |
|      |          |    |        | CHECKED: RHP      |                               |  |  |  |                         |
| DATE | REVISION | BY |        | DATE: 06/20/24    |                               |  |  |  |                         |



**TYPICAL SECTION NOTE:**

1. CONTRACTOR TO PROCESS AND INSTALL CITY PROVIDED RECYCLED ASPHALT PAVEMENT (RAP). CITY PROVIDED RAP MAY CONTAIN LARGE CHUNKS OF ASPHALT. RAP TO BE PICKED UP AT THE CITY OF FAIRBANKS PUBLIC WORKS YARD LOCATED AT 2121 PEGER ROAD.
2. SEEDING, AND TOPSOIL WILL NOT BE MEASURED FOR PAYMENT BUT ARE SUBSIDIARY TO THE RESPECTIVE STORM DRAIN STRUCTURE OR PIPE.
3. FOR SWALE CONSTRUCTION (STA: "F" 12+84 TO STA: "F" 16+20), CONTRACTOR TO PROVIDE EXISTING GROUND SHOTS EVERY 50 FT AT EDGE OF PAVEMENT PROJECT RIGHT AND SWALE FLOWLINE BEFORE REMOVAL OF ASPHALT. ENGINEER TO PROVIDE SWALE FLOWLINE AND EDGE OF PAVEMENT ELEVATIONS. TO BE PAID UNDER PAY ITEM 642.0013.0000 THREE PERSON SURVEY PARTY.



**TYPICAL SECTION**

02/21/2025



|      |          |    |
|------|----------|----|
|      |          |    |
|      |          |    |
|      |          |    |
| DATE | REVISION | BY |

SCALE:

DESIGNED: RHP/KLL  
DRAWN:  
CHECKED: RHP  
DATE: 06/20/24

APPROVED  
CITY ENGINEER  
DATE

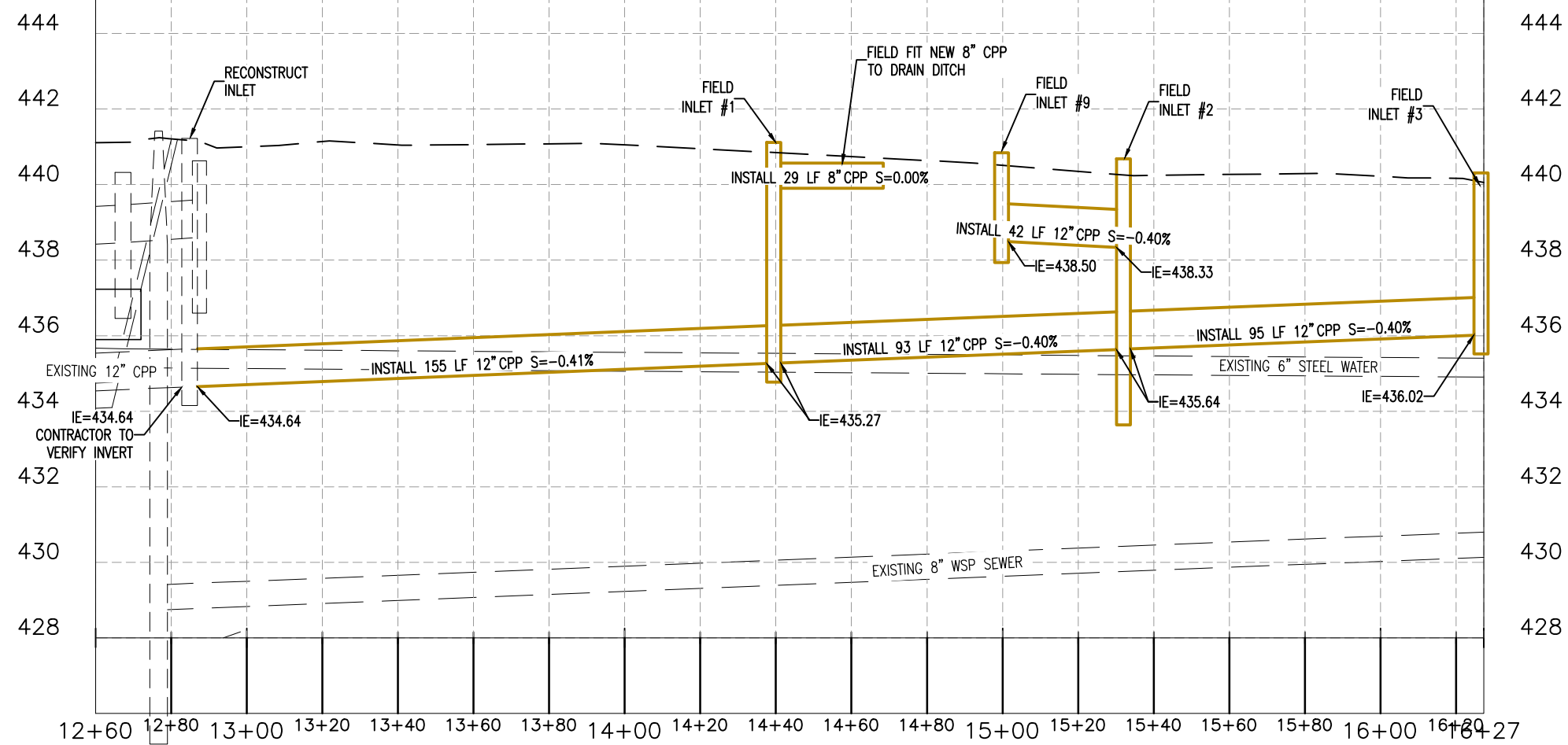
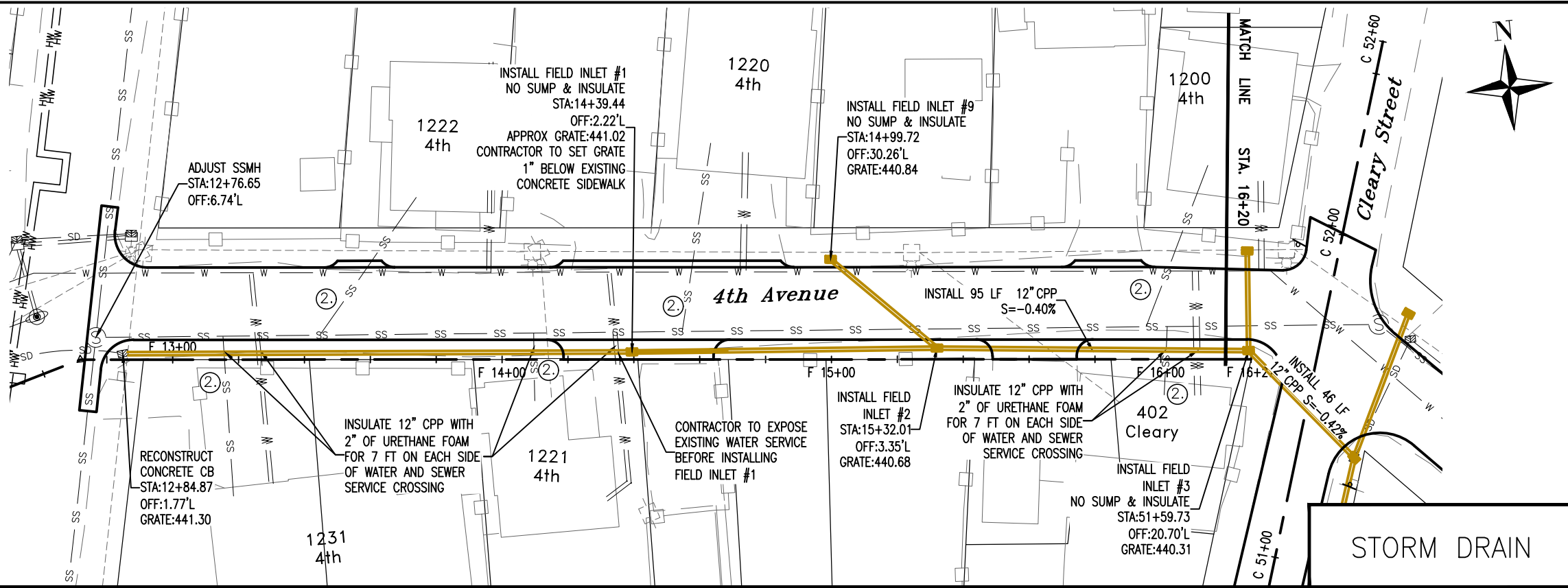



**4TH & STATE STORM  
DRAIN EXTENSION PROJECT**

**CITY OF FAIRBANKS, ALASKA**  
Engineering Department  
Project ITB-25-02

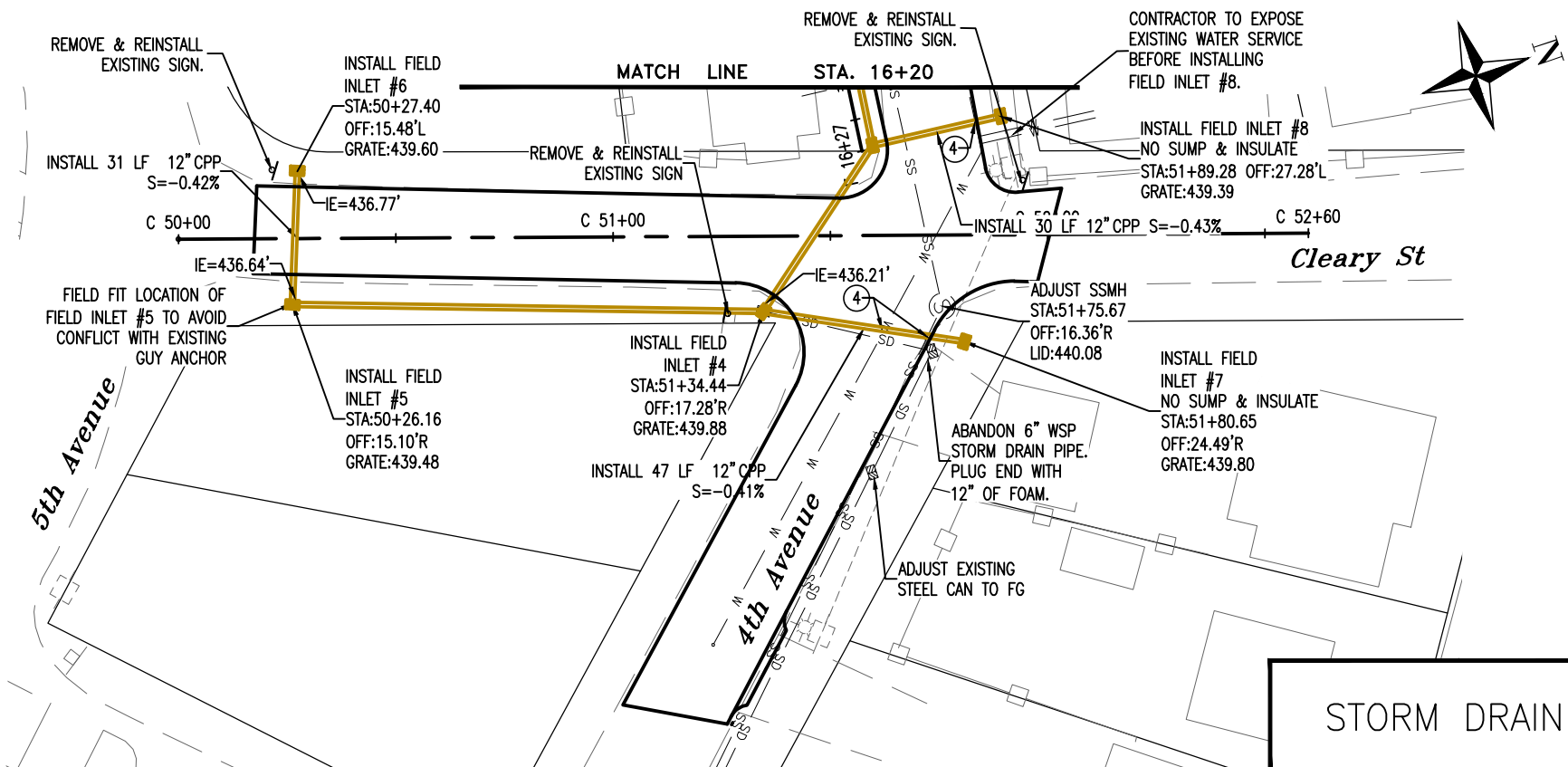
**2.01**  
OF 12  
SHEETS

- NOTES:
- 1. FIELD INLETS STATION/OFFSET AND ELEVATIONS ARE AT CENTER OF STRUCTURE.
  - 2. CONTRACTOR SHALL VIDEO INSPECT ALL EXISTING SEWER SERVICES FROM CLEANOUT TO THE MAIN BEFORE THE START OF CONSTRUCTION.
  - 3. CONTRACTOR TO POTHOLE AHEAD OF NEW STORM DRAIN WORK TO VERIFY ELEVATIONS OF EXISTING WATER AND SEWER SERVICES.
  - 4. SUPPORT AND PROTECT EXISTING FENCES AND UTILITY POLES AS REQUIRED DURING STORM DRAIN INSTALLATION. THIS WORK IS SUBSIDIARY TO 603.0021.0012.
  - 5. INSULATE 12" CPP WITH 2" OF URETHANE FOAM FOR 7 FT ON EACH SIDE OF WATER OR SEWER SERVICE CROSSING.
  - 6. CONTRACTOR TO PROVIDE 12 INCHES OF GRADE RINGS FOR CATCH BASIN ADJUSTMENT IN THE FIELD.



|      |          |    |  |                   |               |   |  |  |      |
|------|----------|----|--|-------------------|---------------|---|--|--|------|
|      |          |    | SCALE:                                       | DESIGNED: RHP/KLL | APPROVED      |  | 4TH & STATE STORM<br>DRAIN EXTENSION PROJECT | CITY OF FAIRBANKS, ALASKA<br>Engineering Department<br>Project ITB-25-02 | 3.01 |
|      |          |    | 1"=20' HORIZ.,<br>1"=2' VERT.<br>(FULL SIZE) | DRAWN: KLL        |               |   |  |  |      |
|      |          |    | 1"=40' HORIZ.,<br>1"=4' VERT.<br>(HALF SIZE) | CHECKED: RHP      | CITY ENGINEER |   |  |  |      |
|      |          |    |  | DATE: 06/20/24    | DATE          |   |  |  |      |
| DATE | REVISION | BY |  |                   |               |   |  |  |      |
|      |          |    |  |                   |               |   |  |  |      |

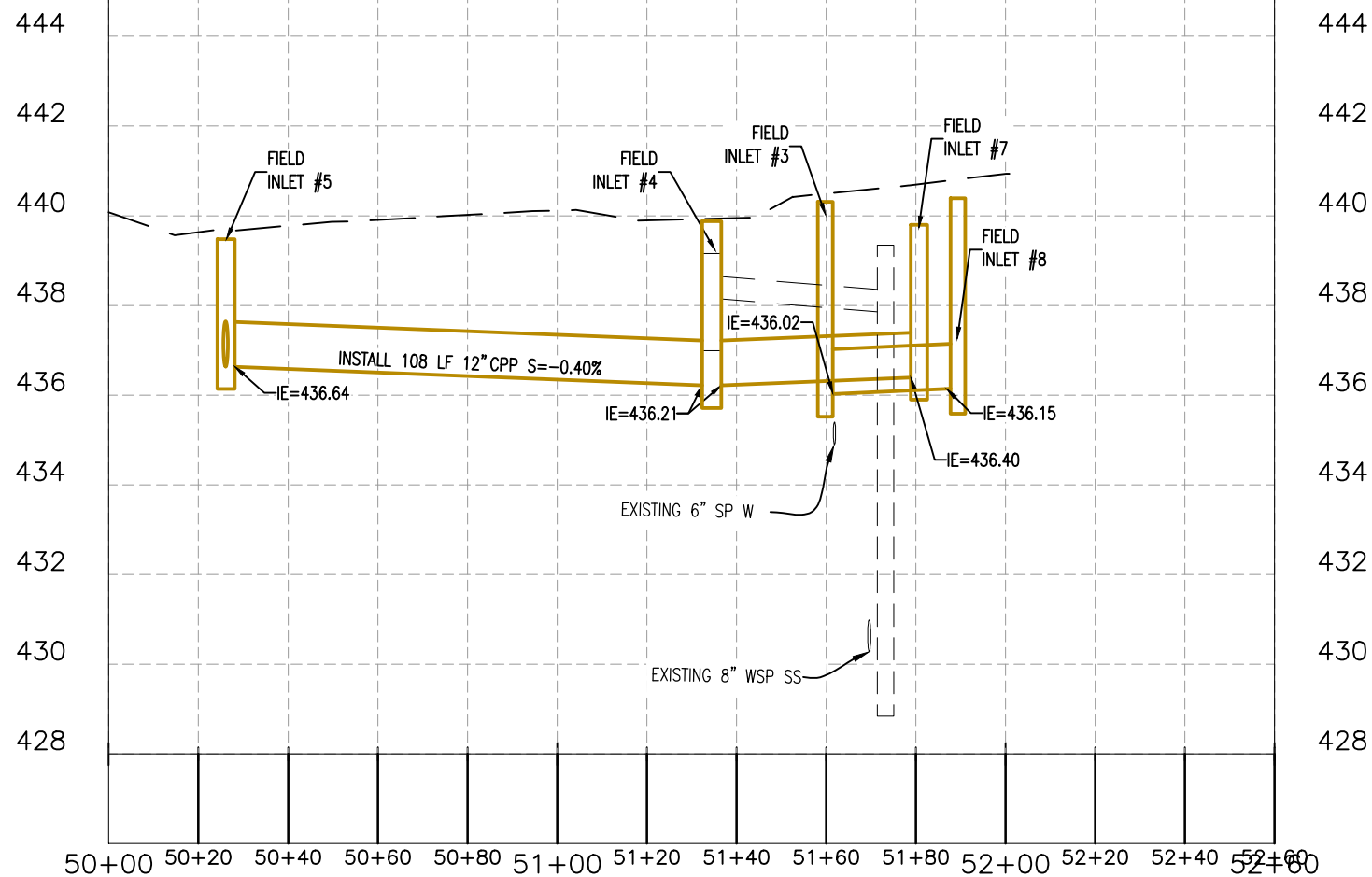
1. FIELD INLETS STATION/OFFSET AND ELEVATIONS ARE AT CENTER OF STRUCTURE.
2. SUPPORT EXISTING POLES AS REQUIRED DURING STORM DRAIN INSTALLATION. THIS WORK IS SUBSIDIARY TO 603.0021.0012.
3. REINSTALL EXISTING SIGNS WITH SOIL EMBEDMENT FOUNDATION.
- ④ 4. INSULATE 12" CPP WITH 2" OF URETHANE FOAM FOR 7 FT ON EACH SIDE OF WATER AND SEWER MAIN CROSSING.
5. CONTRACTOR TO PROVIDE 12 INCHES OF GRADE RINGS FOR CATCH BASIN ADJUSTMENT IN THE FIELD.




STORM DRAIN

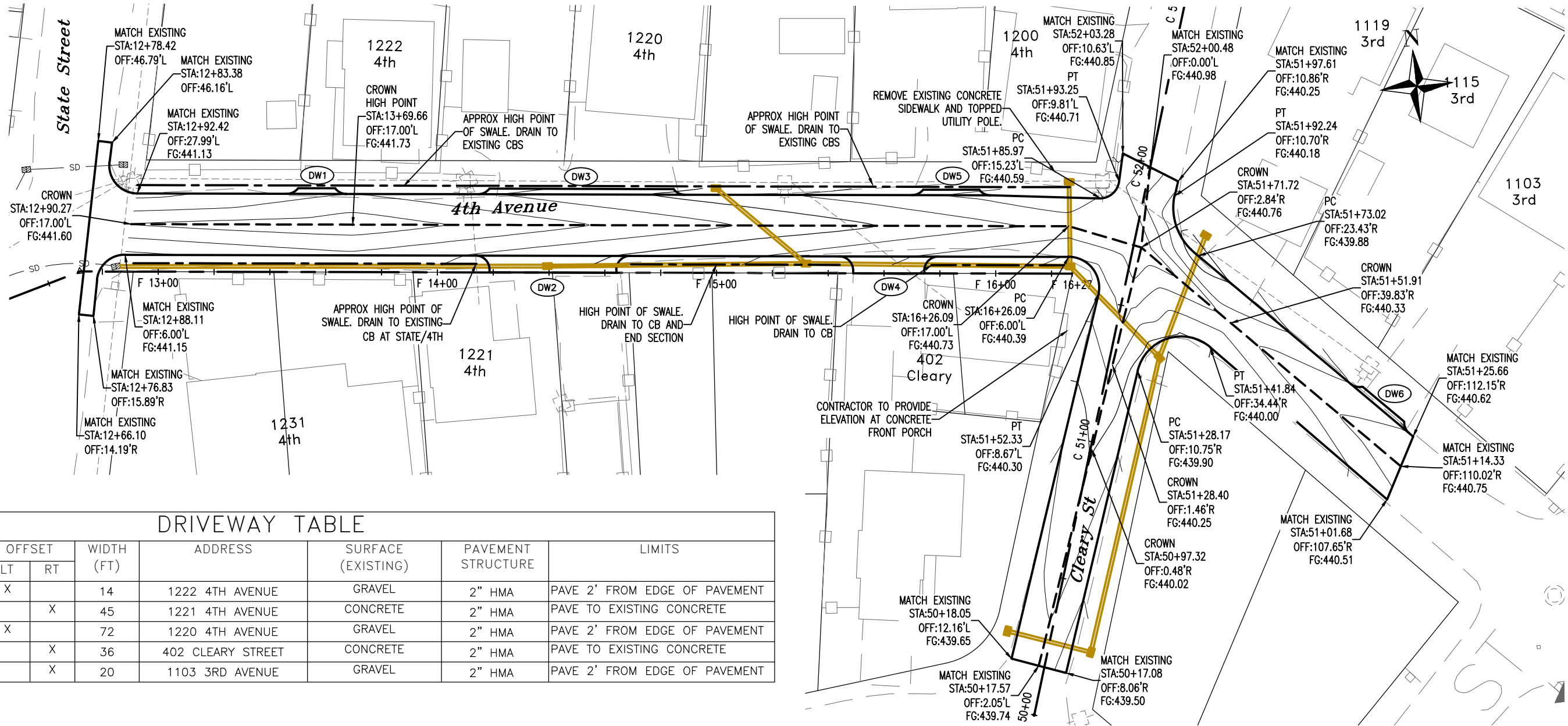


| START<br>STRUCTURE         | END<br>STRUCTURE | LENGTH<br>(LF) | SIZE (IN) | START<br>INVERT<br>ELEV | END<br>INVERT<br>ELEV | SLOPE | REMARKS |
|----------------------------|------------------|----------------|-----------|-------------------------|-----------------------|-------|---------|
| RECONSTRUCT<br>CATCH BASIN | FIELD INLET #1   | 154.59         | 12        | 434.64                  | 435.27                | 0.40% |         |
| FIELD INLET #1             | FIELD INLET #2   | 92.58          | 12        | 435.27                  | 435.64                | 0.40% |         |
| FIELD INLET #2             | FIELD INLET #3   | 94.61          | 12        | 435.64                  | 436.02                | 0.40% |         |
| FIELD INLET #3             | FIELD INLET #4   | 45.69          | 12        | 436.02                  | 436.21                | 0.42% |         |
| FIELD INLET #4             | FIELD INLET #5   | 108.38         | 12        | 436.21                  | 436.64                | 0.40% |         |
| FIELD INLET #5             | FIELD INLET #6   | 30.77          | 12        | 436.64                  | 436.77                | 0.42% |         |
| FIELD INLET #4             | FIELD INLET #7   | 46.77          | 12        | 436.21                  | 436.40                | 0.41% |         |
| FIELD INLET #3             | FIELD INLET #8   | 30.69          | 12        | 436.02                  | 436.15                | 0.42% |         |
| FIELD INLET #2             | FIELD INLET #9   | 42.03          | 12        | 438.50                  | 438.33                | 0.40% |         |



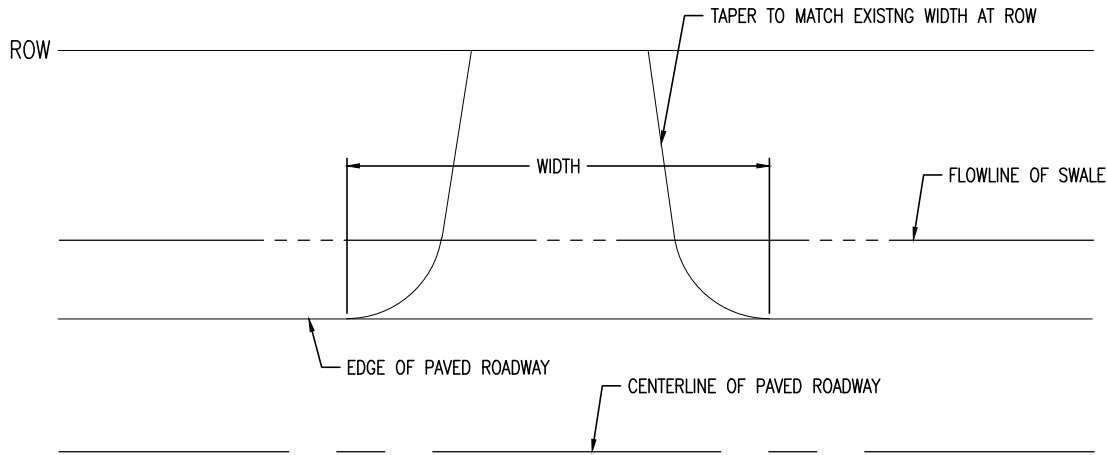
|      |          |    |  |  |                |  |  |                        |              |
|------|----------|----|--|--|----------------|--|--|------------------------|--------------|
|      |          |    | SCALE:                                       | DESIGNED: RHP/KLL                            | APPROVED       |  <div style="text-align: center;"><u>4TH &amp; STATE STORM</u><br/><u>DRAIN EXTENSION PROJECT</u></div> | CITY OF FAIRBANKS, ALASKA<br>Engineering Department<br>Project ITB-25-02 | 3.02                   |              |
|      |          |    | 1"=20' HORIZ.,<br>1"=2' VERT.<br>(FULL SIZE) | 1"=40' HORIZ.,<br>1"=4' VERT.<br>(HALF SIZE) | DRAWN: KLL     |  |  | _____<br>CITY ENGINEER | OF 12 SHEETS |
|      |          |    |  |  | CHECKED: RHP   |  |  |                        |              |
| DATE | REVISION | BY |  |  | DATE: 06/20/24 |  |  | DATE                   |              |

NOTES:  
1. CONTRACTOR TO PROVIDE EXISTING GROUND SHOTS EVERY 50 FT AT CROWN, EDGE OF PAVEMENT, AND DITCH FLOWLINE OR AS DIRECTED BY THE ENGINEER BEFORE REMOVAL OF ASPHALT. ENGINEER WILL PROVIDE NEW DITCH FLOWLINE AND NEW EDGE OF PAVEMENT ELEVATIONS.  
2. DRIVEWAYS TO BE CONSTRUCTED OF 2" OF HMA, TYPE II; CLASS B PG 52E-40.

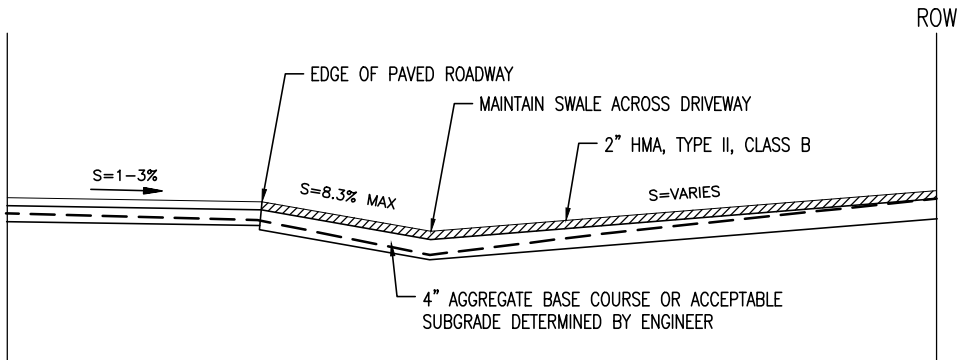


DRIVEWAY TABLE

| DRIVEWAY | STATION | OFFSET |    | WIDTH<br>(FT) | ADDRESS           | SURFACE<br>(EXISTING) | PAVEMENT<br>STRUCTURE | LIMITS                        |
|----------|---------|--------|----|---------------|-------------------|-----------------------|-----------------------|-------------------------------|
|          |         | LT     | RT |               |                   |                       |                       |                               |
| DW1      | 13+56   | X      |    | 14            | 1222 4TH AVENUE   | GRAVEL                | 2" HMA                | PAVE 2' FROM EDGE OF PAVEMENT |
| DW2      | 14+41   |        | X  | 45            | 1221 4TH AVENUE   | CONCRETE              | 2" HMA                | PAVE TO EXISTING CONCRETE     |
| DW3      | 14+51   | X      |    | 72            | 1220 4TH AVENUE   | GRAVEL                | 2" HMA                | PAVE 2' FROM EDGE OF PAVEMENT |
| DW4      | 15+61   |        | X  | 36            | 402 CLEARY STREET | CONCRETE              | 2" HMA                | PAVE TO EXISTING CONCRETE     |
| DW5      | 51+33   |        | X  | 20            | 1103 3RD AVENUE   | GRAVEL                | 2" HMA                | PAVE 2' FROM EDGE OF PAVEMENT |



SWALE DRIVEWAY DETAIL PLAN VIEW




SWALE DRIVEWAY PROFILE VIEW



02/21/2025

ROADWAY

|      |          |    |  |  |  |                               |   |  |  |                         |
|------|----------|----|--|--|--|-------------------------------|---|--|--|-------------------------|
|      |          |    | SCALE:<br>1"=20' HORIZ.,<br>1"=2' VERT.<br>(FULL SIZE) | 1"=40' HORIZ.,<br>1"=4' VERT.<br>(HALF SIZE) | DESIGNED: RHP/KLL                            | APPROVED<br><br>CITY ENGINEER |  | 4TH & STATE STORM<br>DRAIN EXTENSION PROJECT | CITY OF FAIRBANKS, ALASKA<br>Engineering Department<br>Project ITB-25-02 | 3.03<br>OF 12<br>SHEETS |
| DATE | REVISION | BY |  |  | DRAWN: KLL<br>CHECKED: RHP<br>DATE: 06/20/24 |                               |   |  |  |                         |

PROJECT SITE INFORMATION

1. SITE FUNCTION: STORM DRAIN INSTALLATION

2. MEAN ANNUAL PRECIPITATION: 10.53 INCHES AT FAIRBANKS INTERNATIONAL AIRPORT  
SOURCE: <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ak2968>

3. 2-YEAR, 24-HOUR RAINFALL EVENT: 1.09 INCHES, STATION: FAIRBANKS F.O. SITE ID: 10-0215 (SOURCE: SOURCE: [https://hdsc.nws.noaa.gov/pfds/pfds\\_map\\_ak.html](https://hdsc.nws.noaa.gov/pfds/pfds_map_ak.html))

4. PROJECT AREAS ARE LISTED BELOW, MATERIAL SITES NOT INCLUDED:  
PROJECT AREA: 0.55 ACRES  
DISTURBED AREA: 0.35 ACRES  
PRE-CONSTRUCTION PERCENT IMPERVIOUS AREA: 66  
POST CONSTRUCTION PERCENT IMPERVIOUS AREA: 66  
PRE-CONSTRUCTION RUNOFF COEFFICIENT: 0.60  
POST-CONSTRUCTION RUNOFF COEFFICIENT: 0.60

5. MATERIAL SITES: MATERIALS WILL BE CONTRACTOR FURNISHED.

6. LANDSCAPE TOPOGRAPHY: VERY FLAT RESIDENTIAL DEVELOPMENT IN PROJECT CORRIDOR. EXISTING SLOPES IN THIS AREA ARE RELATIVELY FLAT WITH POSITIVE DRAINAGE AWAY FROM STRUCTURES AND ROADS INTO EXISTING STORM DRAIN INFRASTRUCTURE.

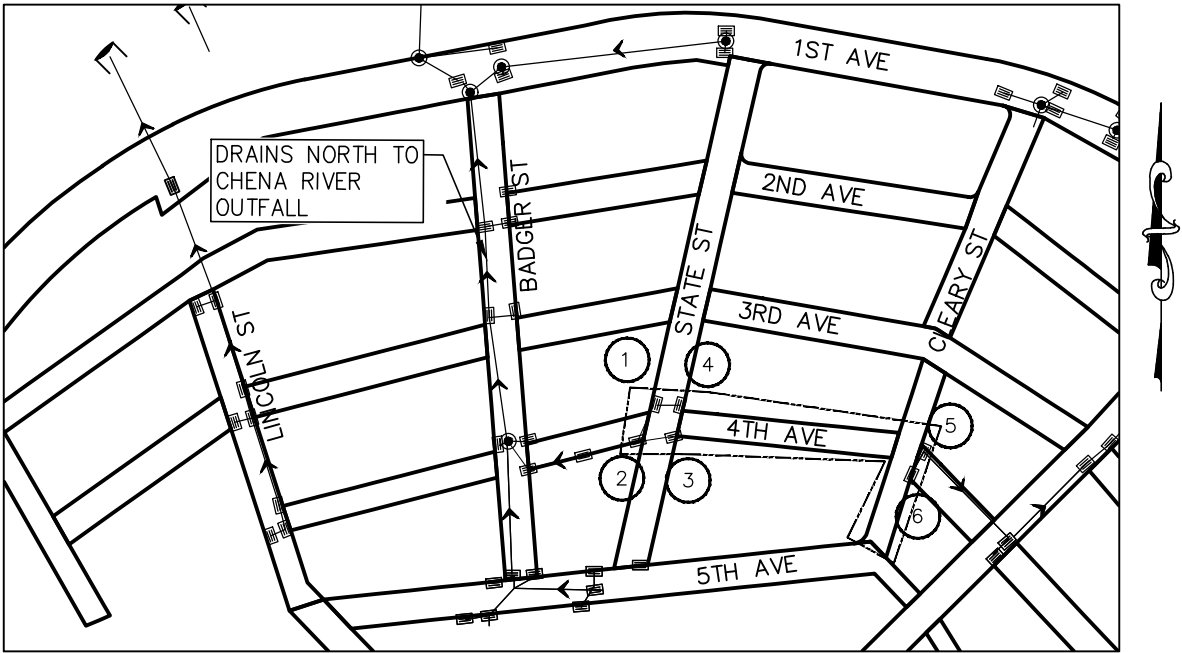
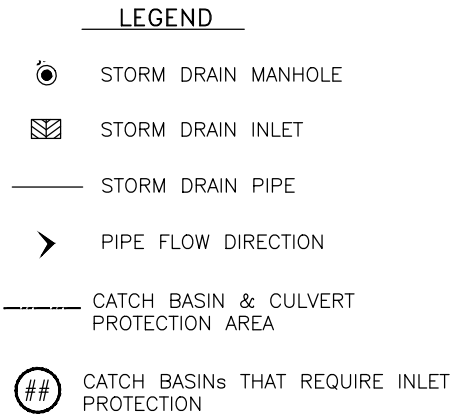
7. DRAINAGE PATTERNS: SURFACE DRAINAGE VIA PIPED STORM DRAIN SYSTEM FLOWS TO THE CHENA RIVER VIA EXISTING OUTFALL LOCATED AT THE GHU WATER TREATMENT PLANT.

8. APPROXIMATE GROWING SEASON: MAY 3 THROUGH OCTOBER 3.

9. EXISTING VEGETATION: PROJECT AREA IS COMMERCIAL LANDSCAPED GRASS, AND TREES.

10. HISTORIC SITE CONTAMINATION: CONTAMINATED SITES HAVE BEEN IDENTIFIED WITHIN 1500 FEET THE PROJECT AREA (SOURCE: [HTTPS://DEC.ALASKA.GOV/SPAR/CSP](https://DEC.ALASKA.GOV/SPAR/CSP))
  - HAZARD ID: 23053, SITE NAME: FMUS FIRE WELL #3 (STATUS: CLEANUP COMPLETE)
  - HAZARD ID: 25024, SITE NAME: FMUS PUMP STA #8 (STATUS: CLEANUP COMPLETE)
  - HAZARD ID: 540, SITE NAME: FAIRBANKS POWER PLANT (USTs2 & 3) (STATUS: CLEANUP COMPLETE)
  - HAZARD ID: 24996, SITE NAME: FMUS – WAREHOUSE FUEL ISLAND (STATUS: CLEANUP COMPLETE)
  - HAZARD ID: 1385, SITE NAME: CITY OF FAIRBANKS 60K GALLON AGSTs (STATUS: CLEANUP COMPLETE)
  - HAZARD ID: 24956, SITE NAME: FMUS – FUEL ISLAND WAREHOUSE/GARAGE (STATUS: CLEANUP COMPLETE)
  - HAZARD ID: 24202, SITE NAME: FMUS – WATER TREATMENT PLANT PS #1 (STATUS: CLEANUP COMPLETE)
  - HAZARD ID: 1403, SITE NAME: GVEA STORAGE PROPERTY (STATUS: CLEANUP COMPLETE)
  - HAZARD ID: 3817, SITE NAME: ARRC FAIRBANKS HOT (FORMERLY MIDNIGHT SUN) (STATUS: CLEANUP COMPLETE)
  - HAZARD ID: 2918, SITE NAME: FORMER A&W WHOLESALE (STATUS: CLEANUP COMPLETE, INSTITUTIONAL CONTROL)

11. STAGING AND STOCKPILE AREAS: CONTRACTOR MUST SEEK LOCATIONS FOR STOCKPILING MATERIAL AND STAGING AND STORAGE OF EQUIPMENT.



4TH AVENUE STORM DRAIN MAP

EROSION & SEDIMENT CONTROL PLAN (ESCP) NOTES

1. THIS PROJECT IS UNDER ONE ACRE AND WILL NOT BE REQUIRED TO DEVELOP A SWPPP OR FILE AN NOI WITH ADEC. EVEN IF THIS PROJECT DOES NOT NEED PERMIT COVERAGE, EROSION AND SEDIMENT CONTROLS WILL BE REQUIRED AND WATER QUALITY WILL BE PROTECTED.
2. THIS SHEET CONTAINS A PLAN VIEW OF MARIKA ROAD AND ITS EXISTING STORM DRAIN SYSTEM, INCLUDING ALL KNOWN STORM DRAIN INLETS, MANHOLES, AND PIPED SECTIONS. THE CONTRACTOR SHALL SELECT AND APPLY APPROPRIATE CONTROLS TO PREVENT SEDIMENT AND OTHER POLLUTANTS FROM ENTERING THE PIPED STORM DRAIN SYSTEM AND DISCHARGING TO THE NOYES SLOUGH.
3. HAVE A SPILL KIT AVAILABLE AT EACH WORK AREA WHEN HEAVY EQUIPMENT IS BEING UTILIZED.
4. ALL ENTRANCE AND EXITS WILL BE SWEEPED AT A FREQUENCY TO MINIMIZE THE TRACK OUT FORM THE PROJECT OR AS DIRECTED BY THE ENGINEER.

TEMPORARY BEST MANAGEMENT PRACTICES (BMPS)

1. BEST MANAGEMENT PRACTICES (BMPS) IMPLEMENTED ON THIS PROJECT WILL UTILIZE THE SPECIFICATIONS PROVIDED IN THE ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION STORM WATER GUIDE OR THE DOT&PF BMP GUIDE, WHENEVER POSSIBLE.
2. INSTALL EROSION AND SEDIMENT CONTROL BMP’S PRIOR TO THE START OF CONSTRUCTION, AS NECESSARY TO MINIMIZE EROSION FROM DISTURBED SURFACES AND CAPTURE SEDIMENT ONSITE.
3. AT A MINIMUM, INLET PROTECTION (I.E. FILTER BAGS PLACED UNDER THE INLET GRATE) SHALL BE PROVIDED AT ALL INLETS WITHIN AND IMMEDIATELY ADJACENT TO THE PROJECT LIMITS.
4. MAINTAIN BMPS ON A REGULAR BASIS INCLUDING, BUT NOT LIMITED TO, REMOVAL AND DISPOSAL OF SEDIMENT AND REPLACING DAMAGED BMPS OR AS DIRECTED BY THE ENGINEER.

HAZARDOUS MATERIAL CONTROL PLAN (HMCP)

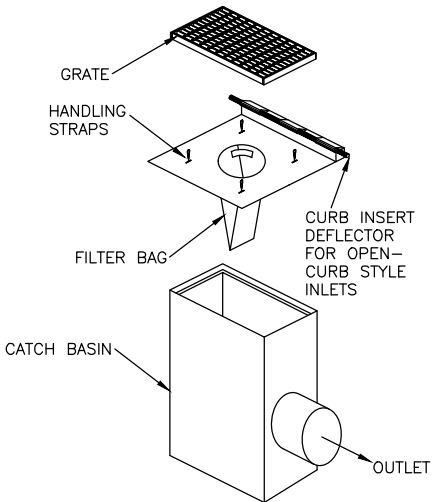
1. SUBMIT AN ELECTRONIC COPY TO THE ENGINEER FOR APPROVAL. THE CITY WILL REVIEW THE HMCP SUBMITTAL WITHIN 14 DAYS AFTER IT IS RECEIVED.
2. PREPARE THE HMCP FOR PREVENTION OF POLLUTION FROM STORAGE, USE, CONTAINMENT, CLEANUP, AND DISPOSAL OF ALL HAZARDOUS MATERIALS, INCLUDING PETROLEUM PRODUCTS RELATED TO CONSTRUCTION ACTIVITIES AND EQUIPMENT. COMPILE MATERIAL SAFETY DATA SHEETS IN ONE LOCATION AND REFERENCE THAT LOCATION IN THE HMCP.
3. DESIGNATE A CONTRACTOR’S SPILL RESPONSE FIELD REPRESENTATIVE WITH 24 HOUR CONTACT INFORMATION. DESIGNATE A SUBCONTRACTOR SPILL RESPONSE COORDINATOR FOR EACH SUBCONTRACTOR. THE SUPERINTENDENT AND CONTRACTOR’S SPILL RESPONSE FIELD REPRESENTATIVE MUST HAVE 24 HOUR CONTACT INFORMATION FOR EACH SUBCONTRACTOR SPILL RESPONSE COORDINATOR AND THE UTILITY SPILL RESPONSE COORDINATOR.

HAULING

1. ENSURE LOADS ARE STABLE OR COVERED SO THAT NO MATERIAL ESCAPEMENT OCCURS DURING HAULING ACTIVITIES.

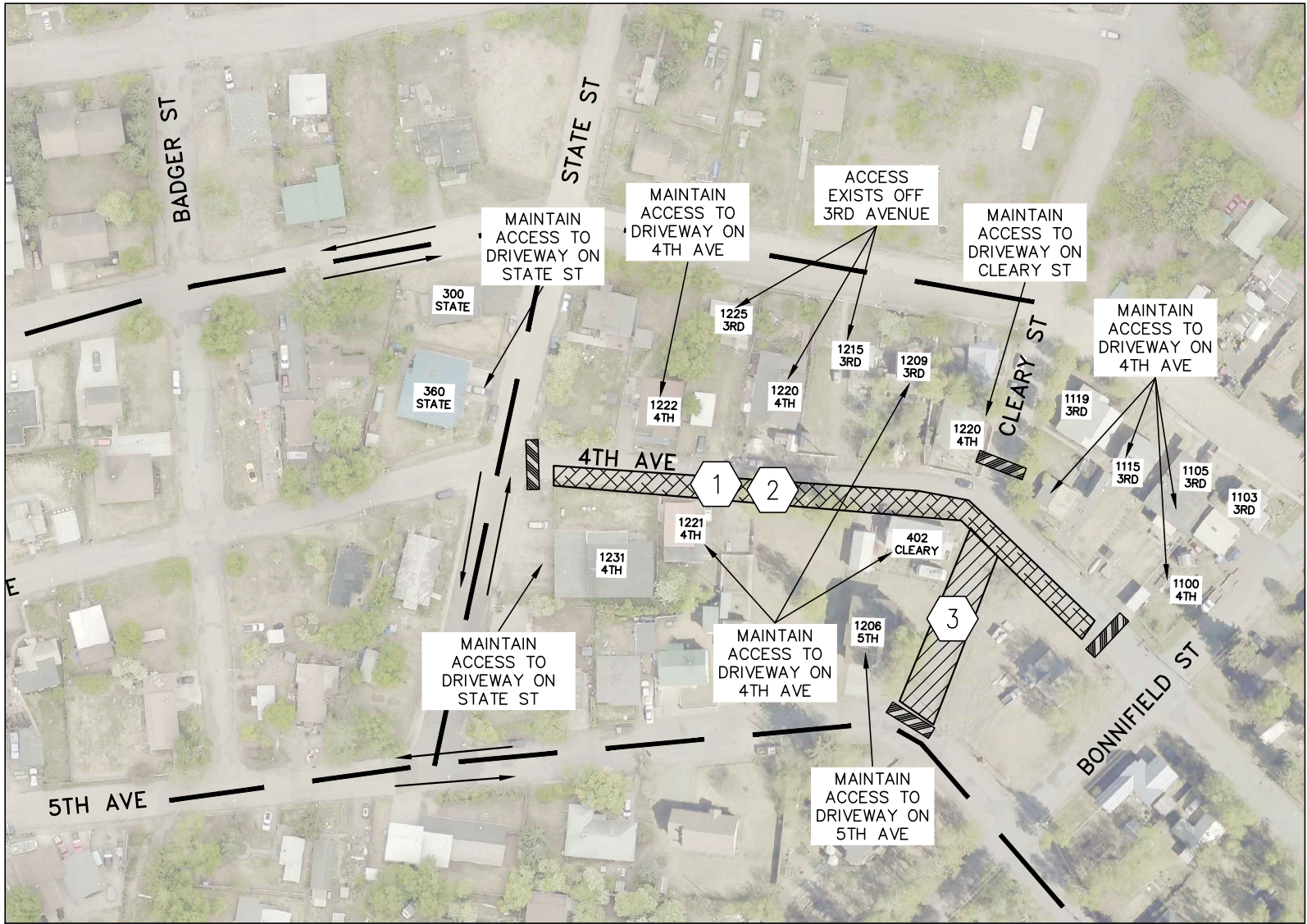
ENVIRONMENTAL INFORMATION

1. RECEIVING WATERS: CHENA RIVER, FAIRBANKS MS4
2. IMPAIRED WATER BODIES: NONE
3. TOTAL MAXIMUM DAILY LOAD (TDML): NONE
4. STORM SEWER / DRAINAGE SYSTEMS: CITY OF FAIRBANKS MS4 CONSISTING OF PIPED AND SURFACE WATER DRAINAGE NETWORK TO OUTFALLS AT CHENA RIVER.
5. THREATENED AND ENDANGERED SPECIES: NONE
6. HISTORICAL & CULTURAL RESOURCE PRESENCE: NONE
7. FISH & WILDLIFE HABITAT PRESENCE: ALL CONSTRUCTION ACTIVITIES SHALL COMPLY WITH THE MIGRATORY BIRD TREAT ACT TO PREVENT THE KILLING OR TAKING OF MIGRATORY BIRDS OR ANY PART, NEST, OR EGG OF ANY SUCH BIRDS.
8. EXISTING PUBLIC WATER SYSTEM (PWS) DRINKING WATER PROTECTION AREAS:
  - PWSID: AK2310730
  - WATER SYSTEM NAME: GOLDEN HEART UTILITIES
  - PWS CONTACT INFORMATION NAME: TARIK SPEAR  
PHONE: (907) 455-4444  
EMAIL: TARIK.SPEAR@AKWATER.COM  
ADDRESS: 3691 CAMERON ST #201, FAIRBANKS, AK 99709



CATCH BASIN INLET PROTECTION DETAIL

|      |          |    |        |                   |                       |  |   |  |              |
|------|----------|----|--------|-------------------|-----------------------|--|---|--|--------------|
|      |          |    | SCALE: | DESIGNED: RHP/KLL | APPROVED              |  | 4TH & STATE STORM DRAIN EXTENSION PROJECT | CITY OF FAIRBANKS, ALASKA<br>Engineering Department<br>Project ITB-25-02 | 4.01         |
|      |          |    |        | DRAWN:            |                       |  |   |  | OF 12 SHEETS |
|      |          |    |        | CHECKED: RHP      |                       |  |   |  |              |
| DATE | REVISION | BY |        | DATE: 06/20/24    | CITY ENGINEER<br>DATE |  |   |  |              |



4TH AVENUE CONSTRUCTION REQUIREMENT NOTES

- 1

4TH AVENUE FROM STATE STREET TO BONNIFIELD STREET MAY BE CLOSED TO THRU VEHICULAR TRAFFIC BUT ACCESS TO RESIDENTIAL DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES.
- 2

PEDESTRIAN ACCESS SHALL BE MAINTAINED THROUGH PROJECT AREA TO ALL RESIDENTIAL PROPERTIES.
- 3

CLEARY STREET FROM 4TH AVENUE TO 5TH AVENUE MAY BE FULLY CLOSED TO VEHICULAR TRAFFIC FOR THE DURATION OF THE PROJECT. USE LINCOLN ST AND BONNIFIELD STREET FOR VEHICULAR DETOUR.


LEGEND

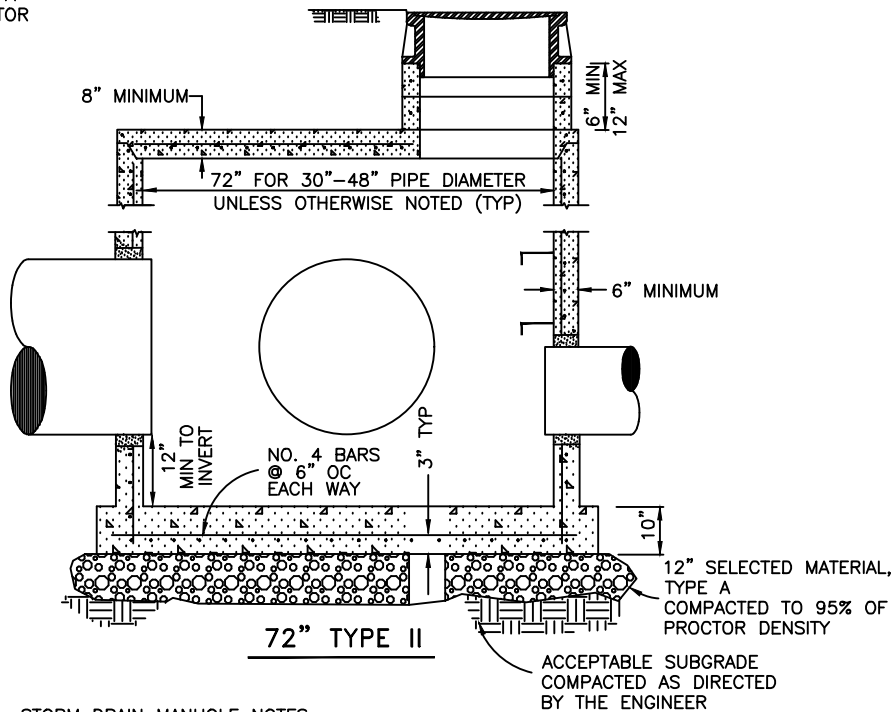
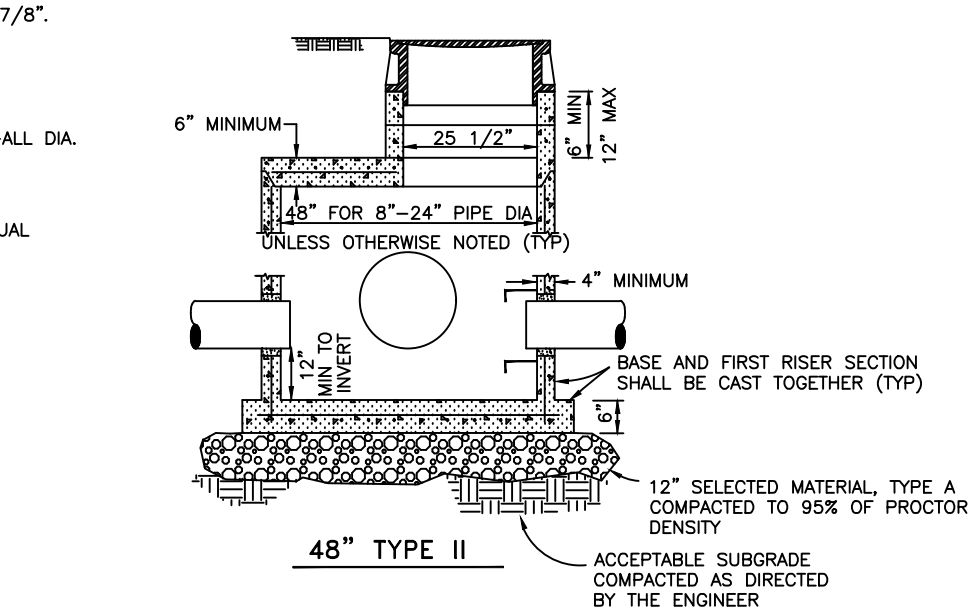
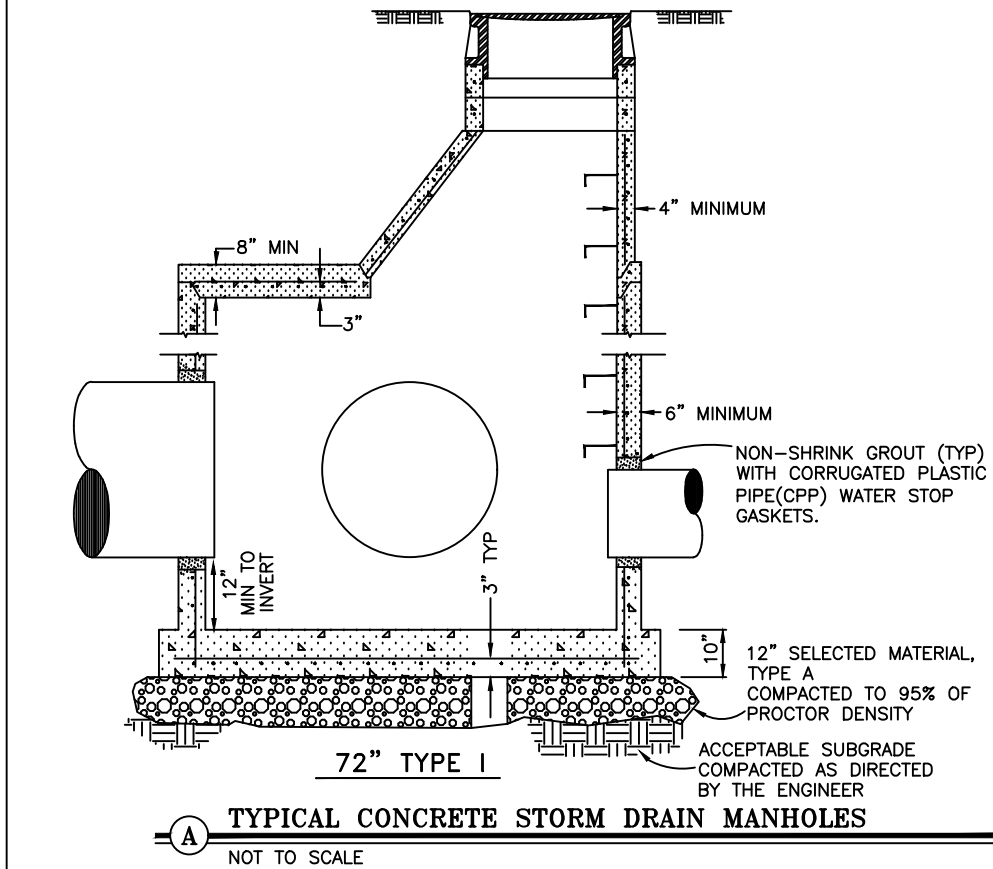
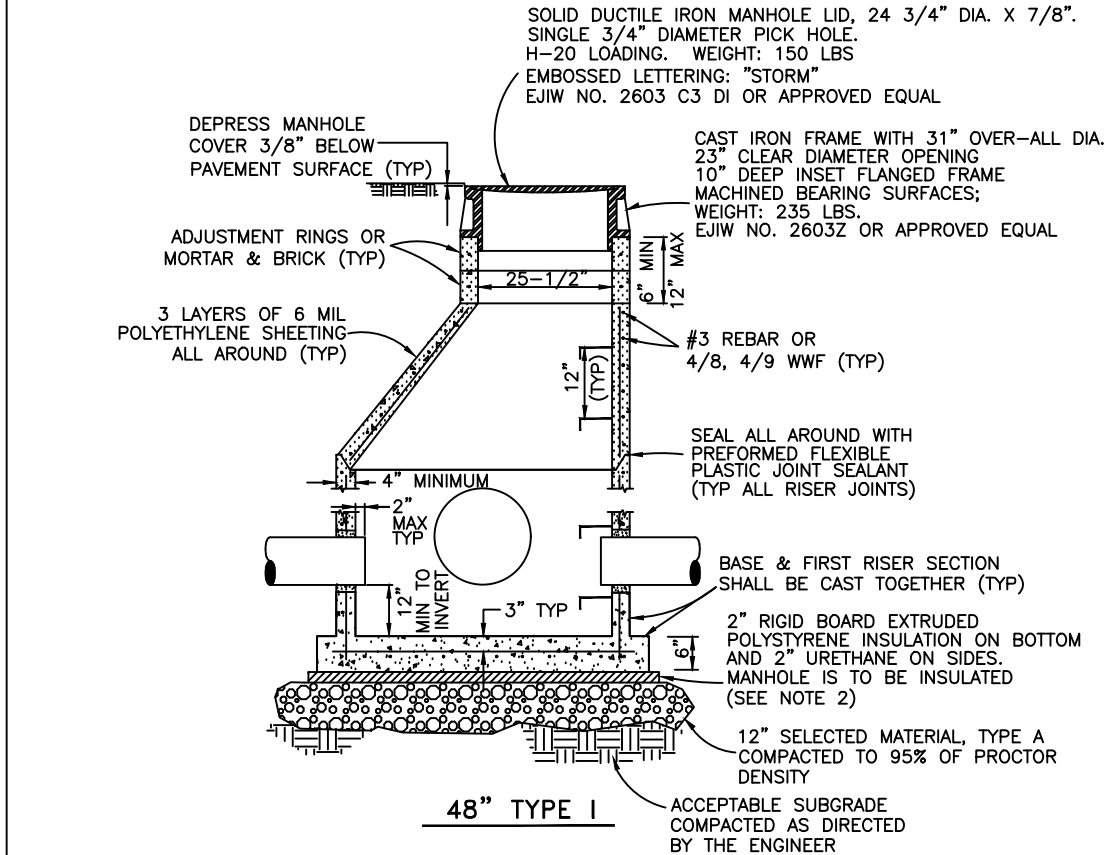
- TYPE 3 BARRICADE WITH R11-2 SIGN
- WORK AREA - FULL CLOSURE
- WORK AREA - CLOSED TO THRU TRAFFIC
- DETOUR ROUTE

TRAFFIC CONTROL GENERAL NOTES

1. THESE TRAFFIC CONTROL PLANS (TCPs) ARE GENERAL IN NATURE. CONTRACTOR TO PROVIDE DETAILED TRAFFIC CONTROL PLANS TO ENGINEER FOR APPROVAL. NO WORK SHALL BEGIN WITHOUT AN APPROVED TCP.
2. REFER TO THE ALASKA TRAFFIC MANUAL (ATM) CURRENT EDITION FOR TRAFFIC CONTROL PLAN SPECIFICATIONS.
3. IMPLEMENT ONLY ONE TRAFFIC CONTROL SETUP AT A TIME AND RESTORE FULL FUNCTION AS SOON AS PRACTICABLE.
4. ALL SIGNS AND BARRICADES SHALL MEET REQUIREMENTS OF THE CURRENT ALASKA TRAFFIC MANUAL (ATM), MUTCD, AND ALASKA SIGN DESIGN SPECIFICATION (ASDS). THE FINAL JUDGMENT IN THE SELECTION, NUMBER AND APPLICATION OF THE TRAFFIC CONTROL DEVICES AND LOCATION OF ALL TRAFFIC CONTROL MEASURES WILL REST WITH THE ENGINEER.
5. EXISTING SIGNS WHICH CONFLICT WITH CONSTRUCTION SIGNING SHALL BE COVERED DURING PROJECT.
6. CONSTRUCTION SIGNING SPECIFIED MAY BE ALTERED BY THE ENGINEER TO MEET CHANGING CONDITIONS AND TO PROTECT THE TRAVELING PUBLIC.
7. BARRICADE SETUPS SHALL HAVE 1 OPERABLE FLASHING LIGHT FOR EACH 10 FEET OF BARRICADE, WITH A MINIMUM OF 2 LIGHTS PER TYPE III BARRICADE. EXCEPT IN A TAPER WHERE ONLY THE FIRST TWO LIGHTS SHALL FLASH (TYPE A) AND THE REMAINDER SHALL BE STEADY BURN (TYPE C).
8. WHEN STREETS ARE RESTRICTED TO ONE LANE, THE MINIMUM CLEAR WIDTH SHALL BE 12' UNLESS OTHERWISE SPECIFIED ON AN APPROVED TRAFFIC CONTROL PLAN (TCP) OR AS DIRECTED BY THE ENGINEER.
9. ACCESS SHALL BE MAINTAINED FOR THE PASSAGE OF EMERGENCY VEHICLES THROUGH THE PROJECT.
- 10.ACCESS SHALL BE PROVIDED TO RESIDENTIAL PROPERTIES DURING THEIR BUSINESS HOURS. CLOSURES SHALL NOT OCCUR WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER. COORDINATE CLOSURE PLANS WITH THE AFFECTED BUSINESS OWNERS AND PROPERTY OWNERS. NOTIFY OWNERS A MINIMUM OF 48 HOURS PRIOR TO IMPLEMENTATION OF AN APPROVED CLOSURE.
- 11.PEDESTRIAN FLAGGERS SHALL BE PROVIDED FOR PUBLIC ACCESS AS REQUIRED THROUGHOUT THE PROJECT LIMITS.
- 12.ALTERNATE ACCESS MAY ALSO BE USED AS PART OF AN APPROVED TRAFFIC CONTROL PLAN. ALTERNATE ACCESS ROUTES SHALL BE CLEARLY SIGNED.
- 13.TYPE "A" FLASHING WARNING LIGHTS SHALL BE USED TO MARK THE TYPE III BARRICADES, ROAD CLOSURES AND ADVANCE DETOUR SIGNING AT NIGHT.
- 14.CONTRACTOR SHALL INTEGRATE TRAFFIC CONTROL WITH OTHER CONSTRUCTION IN THE AREA AS APPLICABLE.
- 15.CONTRACTOR SHALL PROVIDE AFFECTED PROPERTY OWNERS NOTICE OF CONSTRUCTION A MAXIMUM OF 3 WEEKS AND A MINIMUM OF 1 WEEK PRIOR TO CONSTRUCTION. NOTICE TO INCLUDE NEWSPAPER ADVERTISEMENT AND FLYERS TO BUSINESS OWNERS.
- 16.ALL SPECIAL SIGNS SHALL BE FABRICATED OF MATERIALS CONFORMING TO SECTION 615 OF THE SPECIFICATIONS.
- 17.TEMPORARY DRIVING SURFACE SHALL AT A MINIMUM BE COMPACTED GRAVEL OR AS APPROVED BY THE ENGINEER.

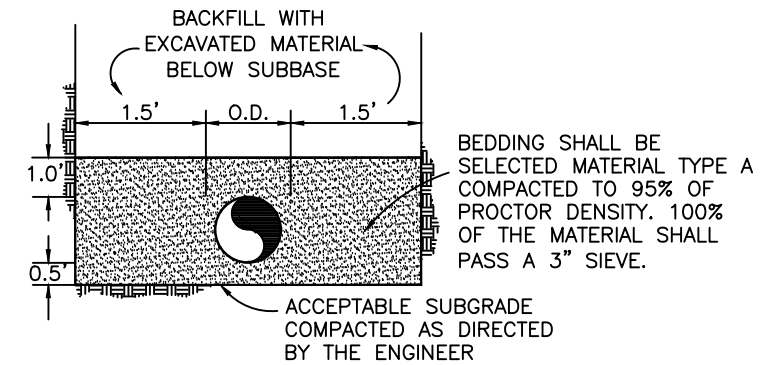
CONSTRUCTION  
REQUIREMENTS  
1 OF 1

|      |          |    |        |                   |                               |  |  |      |  |                 |
|------|----------|----|--------|-------------------|-------------------------------|--|--|------|--|-----------------|
|      |          |    | SCALE: | DESIGNED: RHP/KLL | APPROVED<br><br>CITY ENGINEER |  <div>4TH &amp; STATE STORM<br/>DRAIN EXTENSION PROJECT</div> | CITY OF FAIRBANKS, ALASKA<br>Engineering Department<br>Project ITB-25-02 | 5.01 |  |                 |
|      |          |    |        | DRAWN:            |                               |  |  |      |  |                 |
|      |          |    |        | CHECKED: RHP      |                               |  |  |      |  |                 |
| DATE | REVISION | BY |        | DATE: 06/20/24    |                               |  |  | DATE |  | OF 12<br>SHEETS |



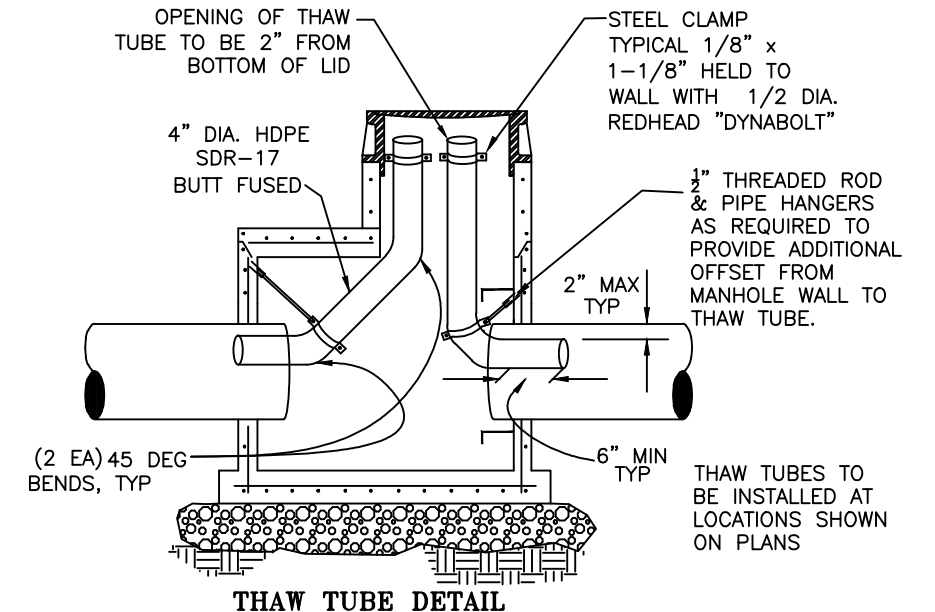
#### STORM DRAIN MANHOLE NOTES:

1. OPENINGS IN MANHOLE TO RECEIVE PIPE SHALL BE 1" TO 2" LARGER THEN THE OD AND PIPE. LARGER OPENINGS SHALL BE FILLED AS DIRECTED BY THE ENGINEER. INSIDE GROUT SURFACE SHALL BE SMOOTH. PROVIDE CPP WATER STOP GASKETS.
2. TYPICALLY, STORM DRAIN MANHOLES DO NOT REQUIRE INSULATION. HOWEVER, SPECIAL CASES REQUIRE INSULATION OF ALL OUTSIDE SURFACES. SEE PLANS.
3. SEAL RISER JOINTS WITH FLEXIBLE PLASTIC JOINT SEALERS.
4. MANHOLE STEPS SHALL BE APPROVED GALVANIZED STEEL OR PLASTIC AND MEET CURRENT OSHA STANDARDS.
5. ALL GROUT SHALL BE NON-SHRINK. PROTECT GROUT DURING CURE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED METHOD.
6. REINFORCEMENT IN BASE, RISER, CONE, FLAT LID, AND ADJUSTING RINGS SHALL COMPLY WITH AASHTO SPECIFICATION M199/ASTM478.



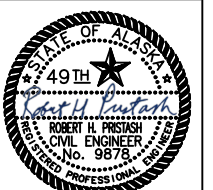
#### PIPE BEDDING DETAIL

NOT TO SCALE



| MANHOLE REINFORCEMENT SCHEDULE |                        |                        |   |
|--------------------------------|------------------------|------------------------|---|
| SECTION                        | MANHOLE SIZE           |                        |   |
|                                | 48"                    | 72"                    |   |
| FLAT BASE                      | 0.39 SQ IN/FT EACH WAY | 0.39 SQ IN/FT EACH WAY | (SHALL COMPLY WITH AASHTO M 199 /ASTM 478)  |
| RISER SECTION*                 | 0.12 SQ IN/FT          | 0.18 SQ IN/FT          | *CIRCUMFERENTIAL REINFORCING ALL AREAS ARE MINIMUM CROSS-SECTIONAL AREA OF REINFORCEMENT PER FOOT OF SECTION. |
| CONE SECTION*                  | 0.12 SQ IN/FT          | 0.18 SQ IN/FT          |   |
| FLAT LID**                     | 0.12 SQ IN/FT EACH WAY | 0.12 SQ IN/FT EACH WAY |   |
| ADJUSTING RING                 | 0.024 SQ IN            | 0.024 SQ IN            |   |

\*\*OPENINGS IN FLAT LIDS SHALL BE ADDITIONALLY REINFORCED WITH A MINIMUM OF THE EQUIVALENT OF 0.2 SQ IN OF STEEL AT 90°.



02/19/2025

|         |                    |         |
|---------|--------------------|---------|
| 3/13/17 | WATER STOP GASKETS | RHP     |
| 2/3/10  | NEW SD1            | GSC,RHP |
| 3/23/07 |                    | RHP     |
| DATE    |                    | BY      |

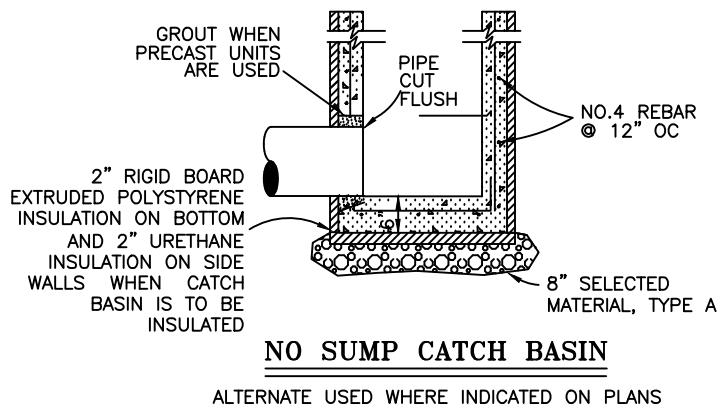
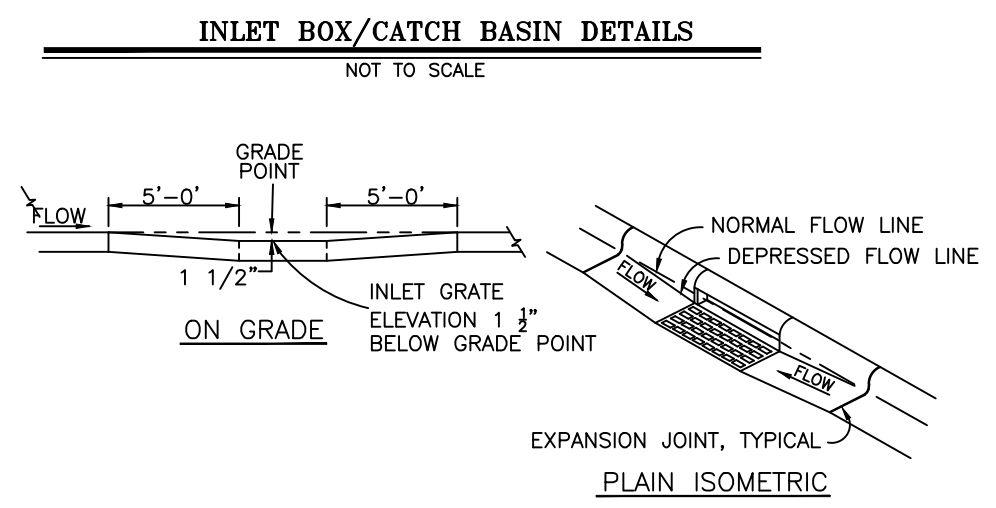
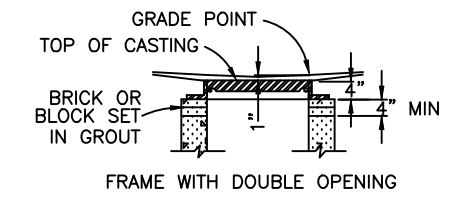
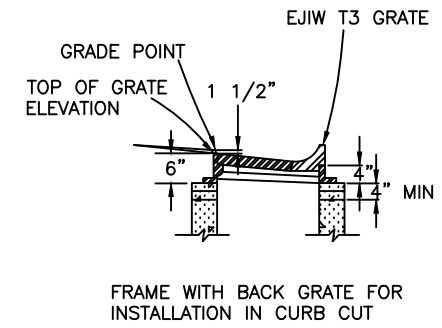
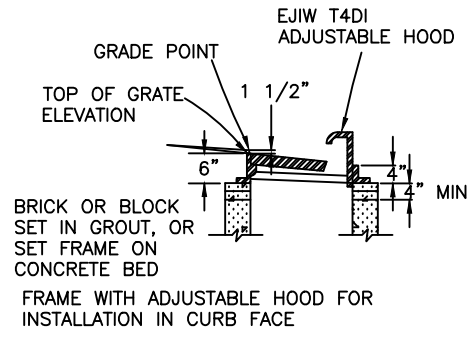
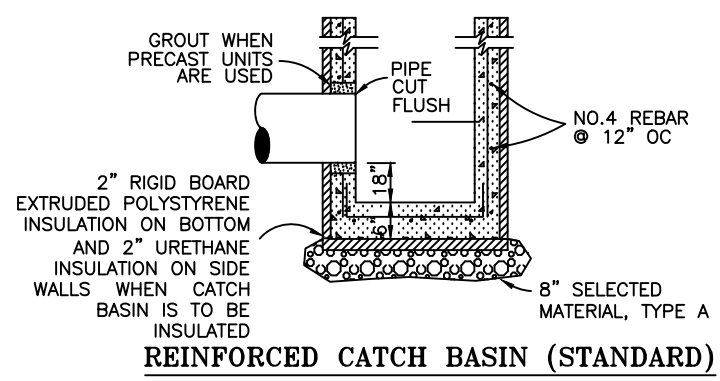
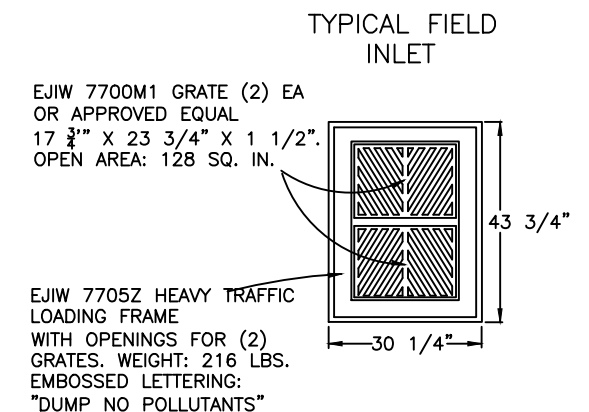
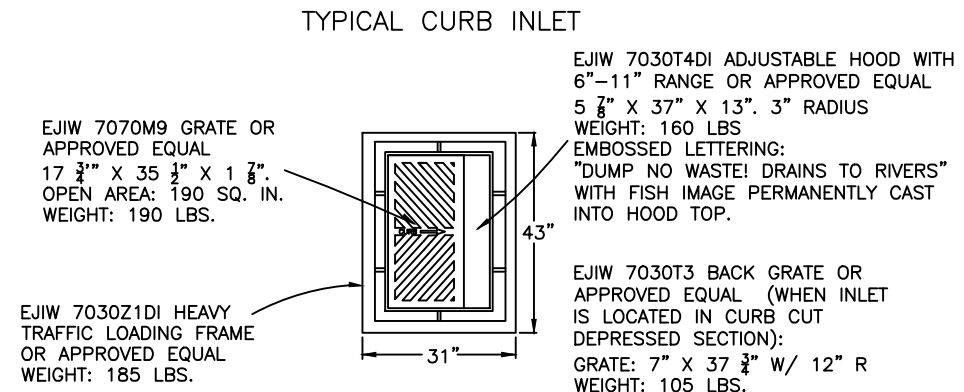
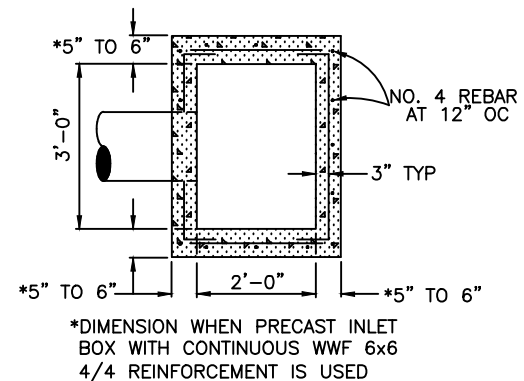
NOT TO SCALE

|           |         |
|-----------|---------|
| DESIGNED: |         |
| DRAWN:    | STAFF   |
| CHECKED:  | RHP,GSC |
| DATE:     | 3/23/07 |

CITY OF FAIRBANKS, ALASKA  
ENGINEERING DIVISION

STANDARD DETAILS  
STORM DRAIN MANHOLES, THAW TUBES AND BEDDING

SD1



**CATCH BASIN NOTES:**

1. THE WORDS "INLET" AND "CATCH BASIN" SHALL BE INTERCHANGEABLE.
2. ALL GROUT SHALL BE NON-SHRINK. PROTECT GROUT DURING CURE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED METHOD.
4. TYPICALLY, CATCH BASINS ARE NOT INSULATED. HOWEVER, SPECIAL CASES REQUIRE INSULATION OF ALL OUTSIDE SURFACES. SEE PLAN NOTE TO INSULATE CB.
5. GROUT THE INSIDE FACE OF ALL JOINTS SMOOTH.

|         |          |         |
|---------|----------|---------|
| 2/3/10  | NEW SD2  | GSC,RHP |
| 3/23/07 |          | RHP     |
| DATE    | REVISION | BY      |

NOT TO SCALE

|           |         |
|-----------|---------|
| DESIGNED: |         |
| DRAWN:    | STAFF   |
| CHECKED:  | RHP,GSC |
| DATE:     | 3/23/07 |

**CITY OF FAIRBANKS, ALASKA**  
ENGINEERING DIVISION

**STANDARD DETAILS**  
STORM DRAIN CATCH BASIN

