

DRUMHELLER DOWNTOWN PLAZA

ISSUED FOR: TENDER
FEBRUARY 15th, 2022

PROJECT TEAM:

LANDSCAPE ARCHITECTURE AND PRIME CONSULTANT:
O2 PLANNING + DESIGN INC.

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Aerial image courtesy of Google Maps, 2021.

CONSULTANTS



SEALS

KEYMAP



ISSUED FOR: TENDER
DATE: 2022-02-15

REVISIONS:
NO. DESCRIPTION DATE BY.

1 ISSUED FOR TENDER 2022-02-15

DESIGNED BY: ZWMW CHECKED BY: MW

DRAWING TITLE:
COVER

G-000

EXISTING BUILDING

EXISTING BUILDING

CONNECT TO EXISTING MUNICIPAL SIDEWALK

EXISTING BUILDING

EXISTING BUILDING

EXISTING BUILDING

NORTHING AND EASTING POINTS

1	N 5703859.23	E 89700.15
2	N 5703853.24	E 89700.26
3	N 5703846.93	E 89700.26
4	N 5703847.86	E 89702.43
5	N 5703845.33	E 89702.47
6	N 5703844.84	E 89702.93
7	N 5703844.41	E 89707.36
8	N 5703844.15	E 89707.93
9	N 5703842.22	E 89710.07
10	N 5703842.21	E 89710.74
11	N 5703846.30	E 89715.46
12	N 5703846.63	E 89715.63
13	N 5703847.69	E 89715.72
14	N 5703847.69	E 89720.70
15	N 5703834.23	E 89720.72
16	N 5703834.25	E 89728.32
17	N 5703832.33	E 89730.74
18	N 5703827.27	E 89730.86
19	N 5703827.43	E 89739.80
20	N 5703822.65	E 89739.95
21	N 5703831.61	E 89714.53
22	N 5703832.27	E 89714.24
23	N 5703833.91	E 89714.91
24	N 5703834.22	E 89715.37
25	N 5703831.26	E 89711.40
26	N 5703827.48	E 89710.16
27	N 5703827.04	E 89709.27
28	N 5703829.16	E 89703.23
29	N 5703829.82	E 89702.74
30	N 5703830.73	E 89702.73
31	N 5703831.23	E 89703.17
32	N 5703831.72	E 89707.39
33	N 5703831.96	E 89707.91
34	N 5703833.77	E 89709.91
35	N 5703833.61	E 89710.69
36	N 5703831.97	E 89711.49
37	N 5703831.62	E 89711.51
38	N 5703820.78	E 89700.75
39	N 5703823.40	E 89700.74
40	N 5703830.14	E 89700.66
41	N 5703831.41	E 89697.35
42	N 5703833.97	E 89695.52
43	N 5703838.07	E 89702.48
44	N 5703843.01	E 89695.40
45	N 5703845.57	E 89697.02
46	N 5703844.86	E 89696.76
47	N 5703844.87	E 89697.42
48	N 5703846.11	E 89699.74
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51	N 5703844.18	E 89704.55
52	N 5703843.69	E 89707.70
53	N 5703842.59	E 89710.41
54	N 5703843.44	E 89712.95
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56	N 5703845.88	E 89720.25
57	N 5703842.88	E 89720.25
58	N 5703839.88	E 89720.25
59	N 5703836.88	E 89720.25
60	N 5703834.76	E 89719.27
62	N 5703833.72	E 89715.37
63	N 5703833.78	E 89709.18
64	N 5703832.13	E 89706.53
65	N 5703833.39	E 89710.24
66	N 5703830.77	E 89704.02
67	N 5703830.74	E 89703.23
68	N 5703831.04	E 89699.74
69	N 5703832.28	E 89697.42
70	N 5703832.29	E 89696.76

PROJECT
DRUMHELLER
DOWNTOWN PLAZA
 FOR
 MUNICIPALITY OF DRUMHELLER

CONSULTANTS



SEALS

KEYMAP



ISSUED FOR: TENDER
 DATE: 2022-02-15

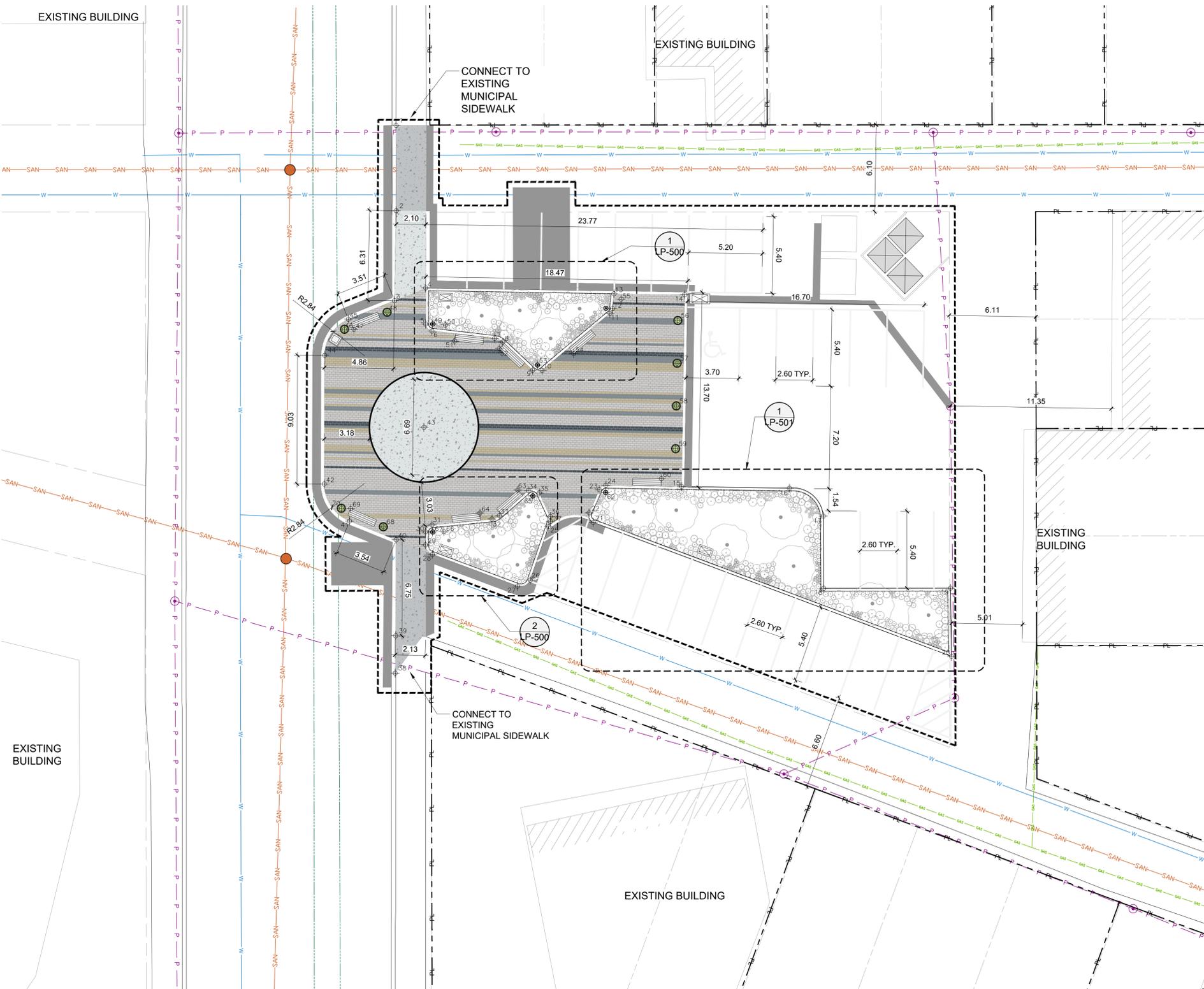
REVISIONS:	NO.	DESCRIPTION.	DATE.	BY.

1 ISSUED FOR TENDER 2022-02-15

DESIGNED BY: ZW/MW CHECKED BY: MW

DRAWING TITLE:
LAYOUT PLAN

DRUMHELLER DOWNTOWN PLAZA
 210201

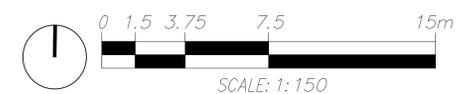


GENERAL LEGEND

- LIMIT OF WORK
- - - - - PROPERTY LINE

UTILITIES LEGEND

- ⊙ EXISTING POWER POLE
- P — EXISTING OVERHEAD POWER LINE
- EXISTING CURB
- EXISTING STORM SEWER
- SAN — EXISTING SANITARY LINE
- W — EXISTING WATER LINE
- G — EXISTING GAS LINE
- PROPOSED UNDERGROUND POWER LINES
- ⊙ PROPOSED IRRIGATION SPRINKLERS
- PROPOSED IRRIGATION LINES



LL-100

CONSULTANTS



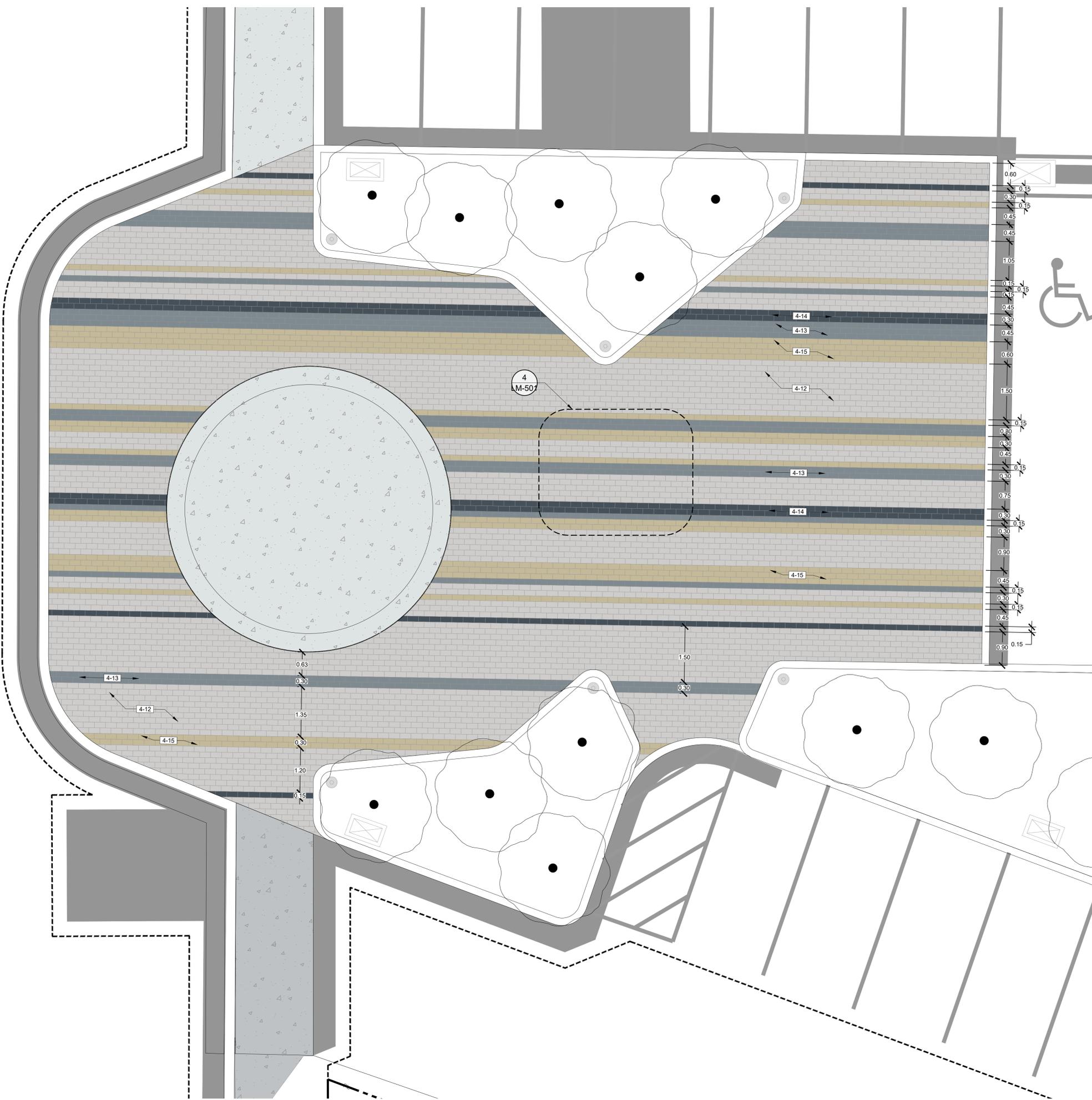
SEALS

PAVING MATERIALS SCHEDULE

SYMBOL	4 HARDCAPE DESCRIPTION	QTY	DETAIL
[Symbol]	PAVING COLOUR 1 - 65MM BROADWAY PAVER	182.0 m ²	1/LM-500
[Symbol]	PAVING COLOUR 2 - 65MM BROADWAY PAVER	39.9 m ²	1/LM-500
[Symbol]	PAVING COLOUR 3 - 65MM BROADWAY PAVER	16.3 m ²	1/LM-500
[Symbol]	PAVING COLOUR 4 - 65MM BROADWAY PAVER	49.3 m ²	1/LM-500

LEGEND

- LIMIT OF WORK
- - - - - PROPERTY LINE



KEYMAP



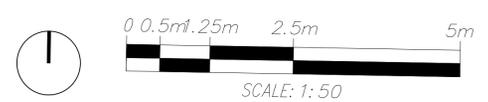
ISSUED FOR TENDER
 DATE: 2022-02-15

REVISIONS:	NO.	DESCRIPTION.	DATE.	BY.

DESIGNED BY: ZW/MW CHECKED BY: MW



DRAWING TITLE:
PAVING LAYOUT PLAN



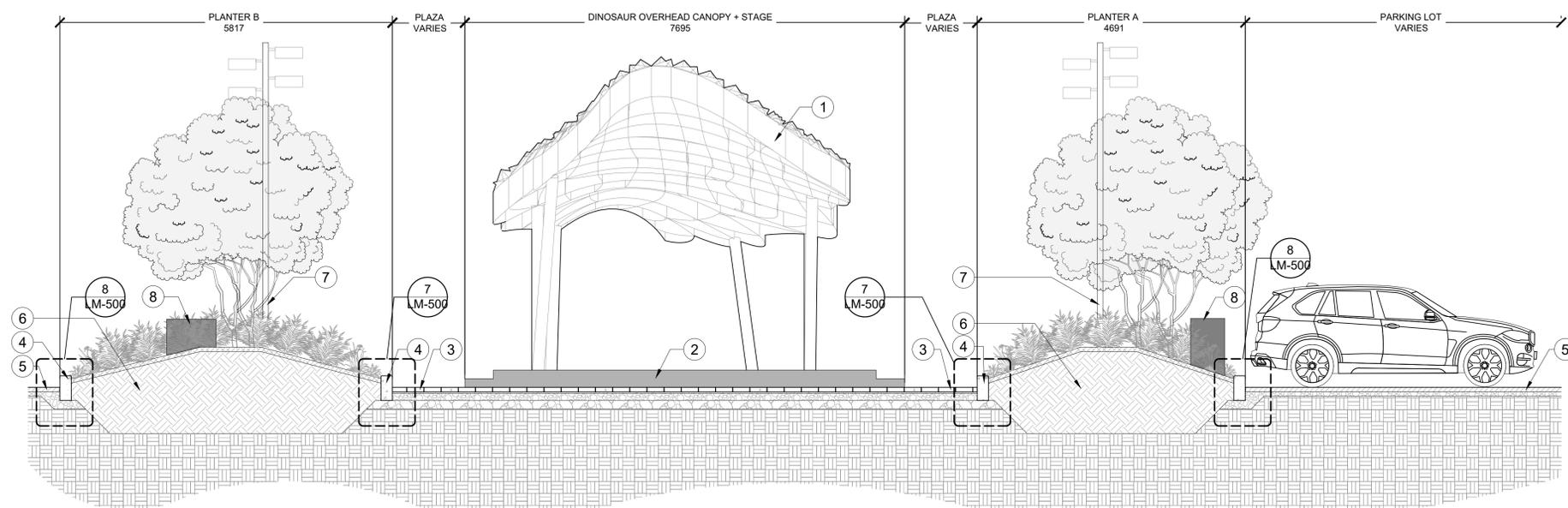
LM-101

PROJECT
**DRUMHELLER
 DOWNTOWN PLAZA**
 FOR
 MUNICIPALITY OF DRUMHELLER

CONSULTANTS



SEALS

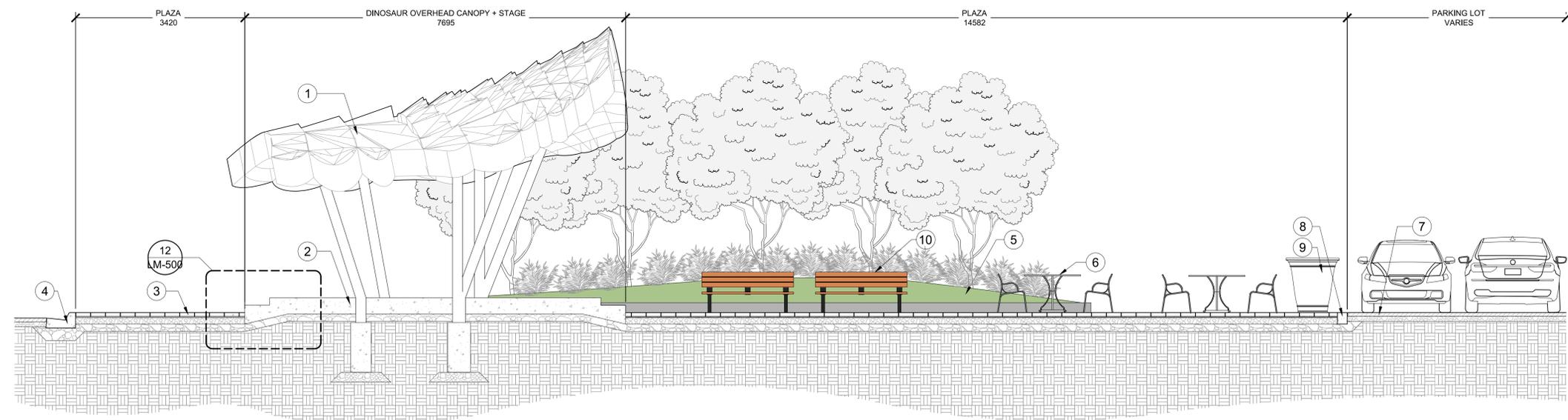


- ① DINOSAUR OVERHEAD CANOPY
- ② CONCRETE STAGE
- ③ ADJACENT PAVERS, REFER TO DETAILS
- ④ ADJACENT PLANTER, REFER TO DETAILS
- ⑤ ADJACENT ASPHALT PAVING, REFER TO DETAILS
- ⑥ PLANTING BED, REFER TO DETAILS
- ⑦ LIGHT FEATURE, REFER TO DETAILS
- ⑧ PEDESTAL, REFER TO ELECTRICAL

① SECTION N-S
 1:50

P-02-DRU-89

KEYMAP



- ① DINOSAUR OVERHEAD CANOPY
- ② CONCRETE STAGE
- ③ ADJACENT PAVERS, REFER TO DETAILS
- ④ CURB AND GUTTER, REFER TO CIVIL
- ⑤ PLANTER A, REFER TO DETAILS
- ⑥ MOVEBLE FURNITURE
- ⑦ ADJACENT ASPHALT PAVING, REFER TO DETAILS
- ⑧ FLUSH CONCRETE HEADER
- ⑨ TOWN OF DRUMHELLER EXISTING PLANTERS
- ⑩ DINOSAUR THEMED BENCH, REFER TO DETAILS

② SECTION W-E
 1:50

DETAD/REJ/EB

ISSUED FOR: TENDER
 DATE: 2022-02-15

NO.	DESCRIPTION	DATE	BY

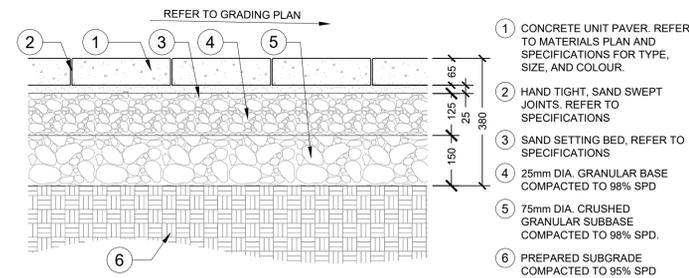
1 ISSUED FOR TENDER 2022-02-15

DESIGNED BY: ZW/MW CHECKED BY: MW

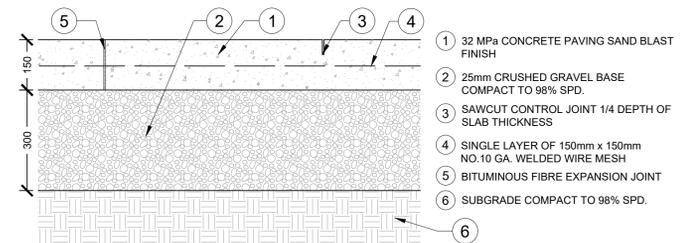


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SECTIONS

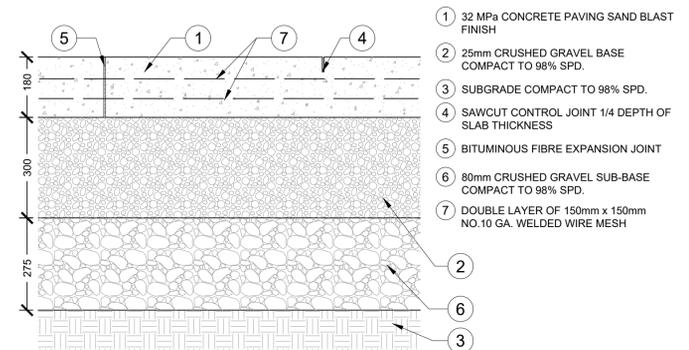
LS-500



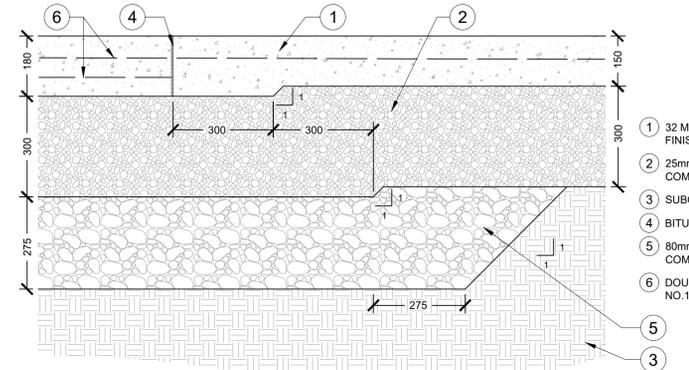
1 PEDESTRIAN UNIT PAVING
1:10 P-02-DRU-74



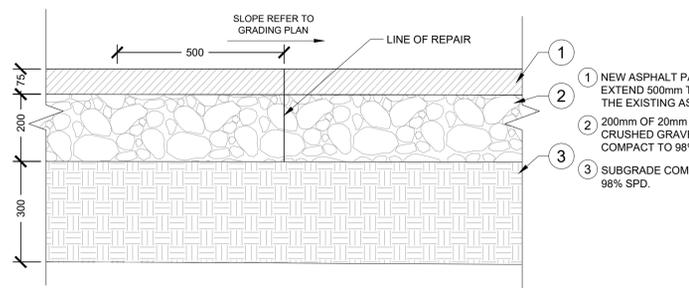
2 CONCRETE PAVING - LIGHT DUTY
1:10 P-02-DRU-43



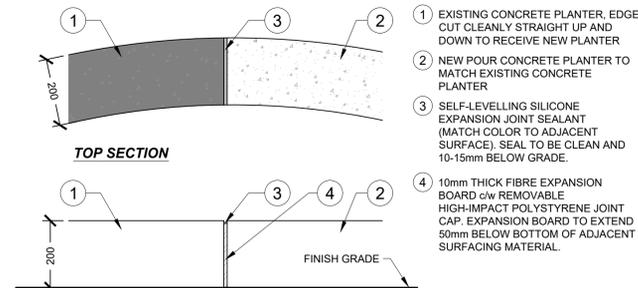
3 CONCRETE PAVING - HEAVY DUTY
1:10 P-02-DRU-44



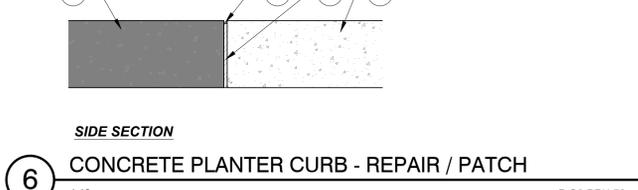
4 TRANSITION - LIGHT DUTY TO HEAVY DUTY CONCRETE
1:10 P-02-DRU-45



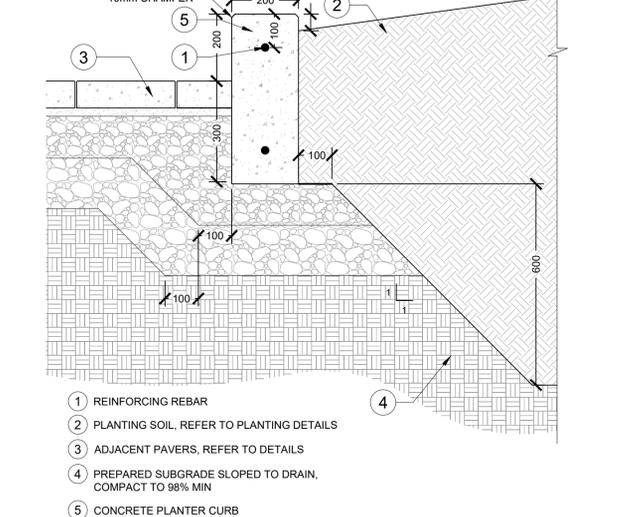
5 ASPHALT - REPAIR
1:10 P-02-DRU-75



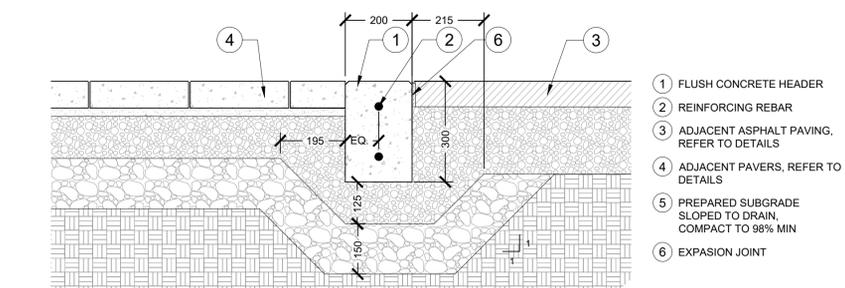
6 CONCRETE PLANTER CURB - REPAIR / PATCH
1:10 P-02-DRU-76



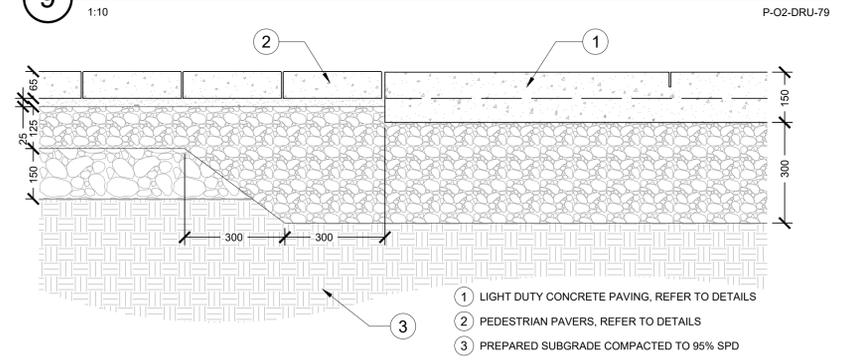
7 CONCRETE PLANTER CURB ADJACENT TO PAVERS - NEW POUR
1:10 P-02-DRU-77



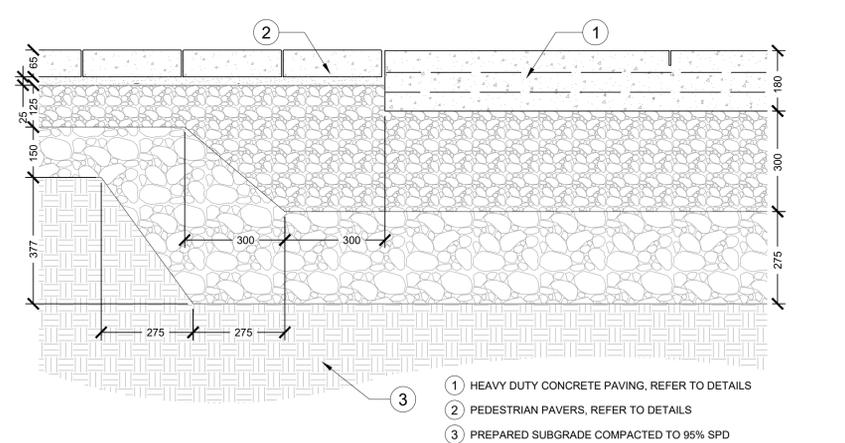
8 CONCRETE PLANTER CURB ADJACENT TO ASPHALT - NEW POUR
1:10 P-02-DRU-78



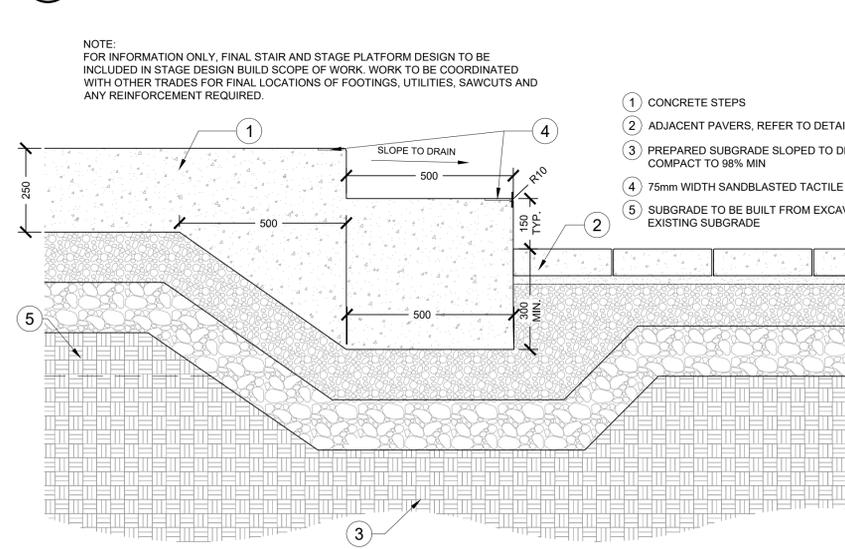
9 FLUSH CONCRETE HEADER
1:10 P-02-DRU-79



10 PEDESTRIAN PAVERS AND LIGHT DUTY CONCRETE PAVING CONNECTION
1:10 P-02-DRU-91



11 PEDESTRIAN PAVERS AND HEAVY DUTY CONCRETE PAVING CONNECTION
1:10 P-02-DRU-92



12 CONCRETE STEPS AT STAGE - STAGE DESIGN BUILD / FOR INFORMATION ONLY
1:10 P-02-DRU-80



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	1	ISSUED FOR TENDER	2022-02-15	

DESIGNED BY: ZW/MW CHECKED BY: MW

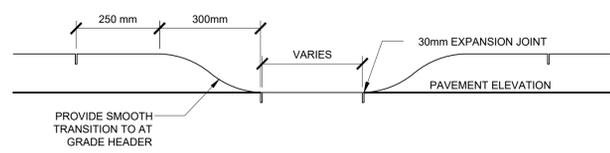
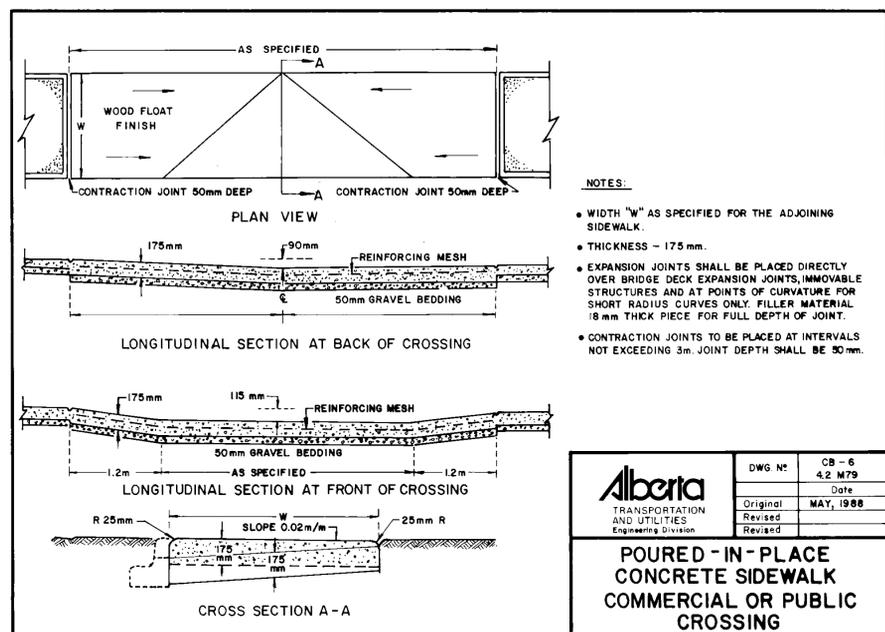
DRAWING TITLE:
PAVEMENT DETAILS

LM-500

CONSULTANTS

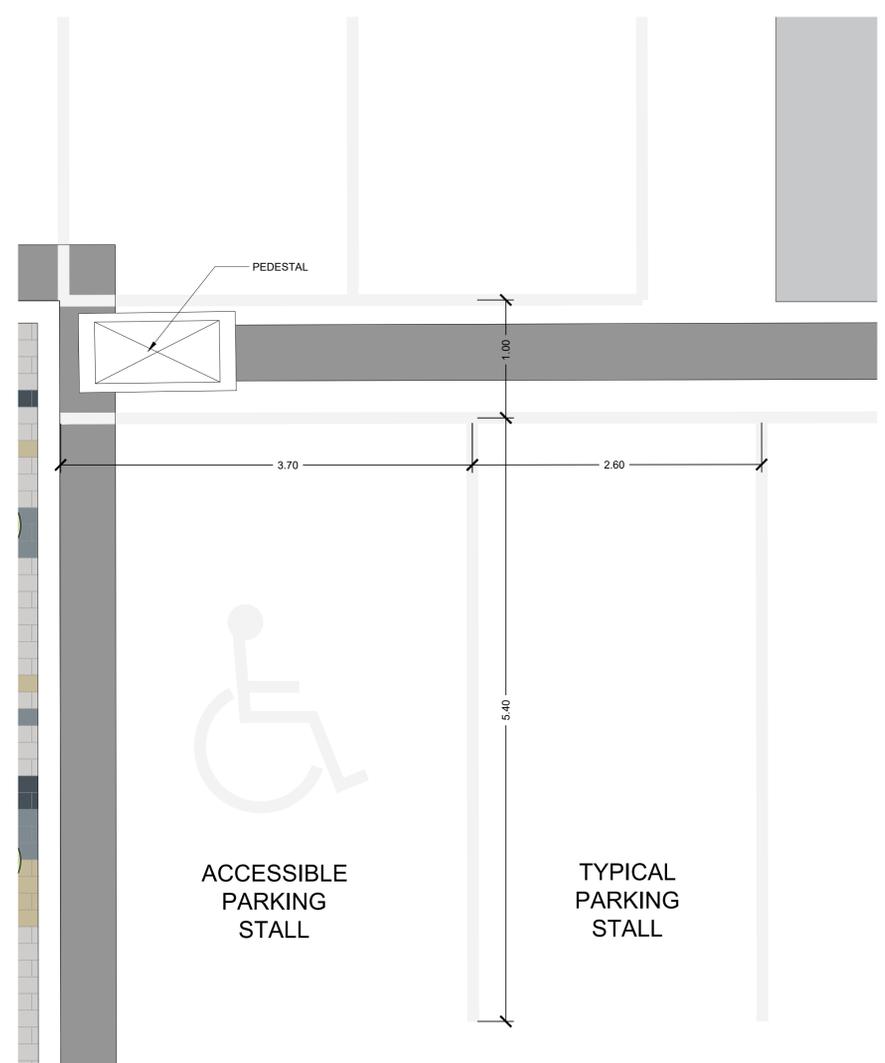


SEALS

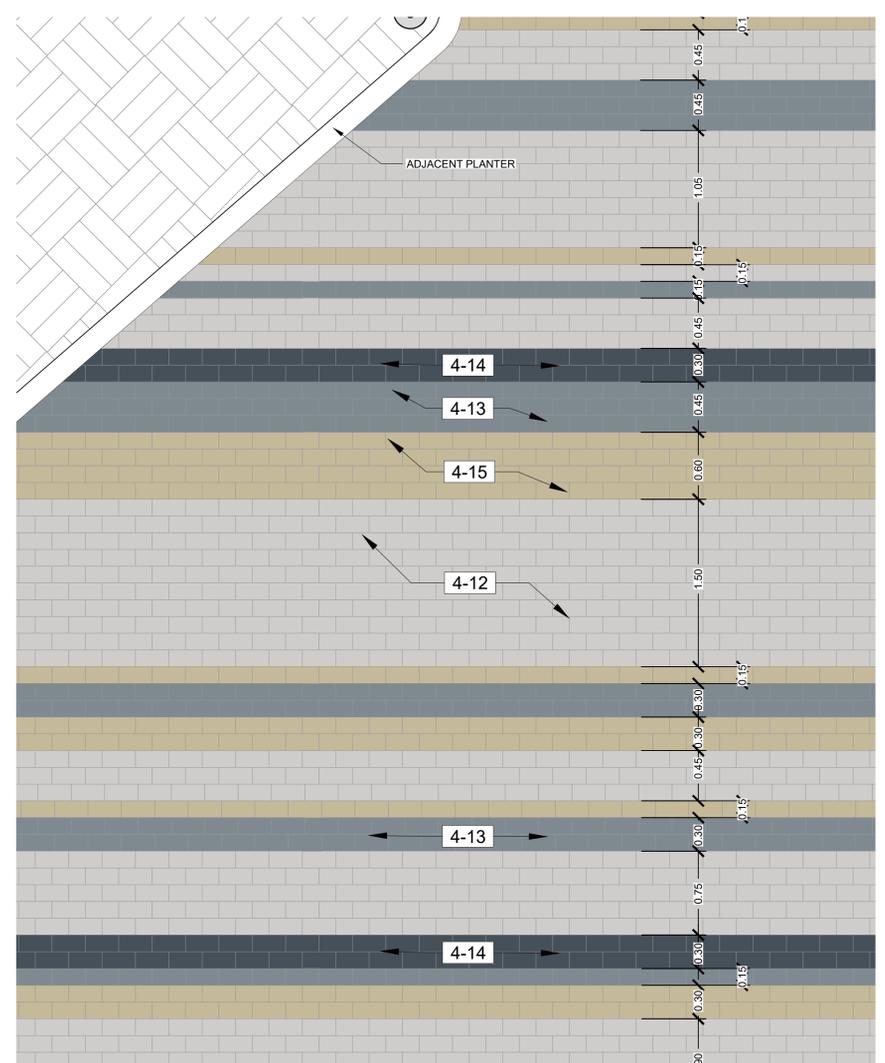


3 CURB CUT
 1:10 P-02-DRU-21

1 SIDEWALK TRANSITIONS
 NTS P-02-DRU-48



2 PARKING LINE PAINT
 1:30 P-02-DRU-81



SYMBOL	4 HARDSCAPE DESCRIPTION
4-12	PAVING COLOUR 1 - 65MM BROADWAY PAVER
4-13	PAVING COLOUR 2 - 65MM BROADWAY PAVER
4-14	PAVING COLOUR 3 - 65MM BROADWAY PAVER
4-15	PAVING COLOUR 4 - 65MM BROADWAY PAVER

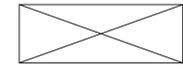
4 PAVING ENLARGEMENT DETAIL
 1:30 P-02-DRU-94



ISSUED FOR: TENDER
 DATE: 2022-02-15

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	1	ISSUED FOR TENDER	2022-02-15	

DESIGNED BY: ZW/MW CHECKED BY: MW



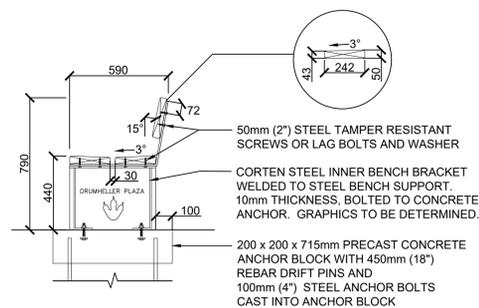
DRAWING TITLE:
PAVEMENT DETAILS

LM-501

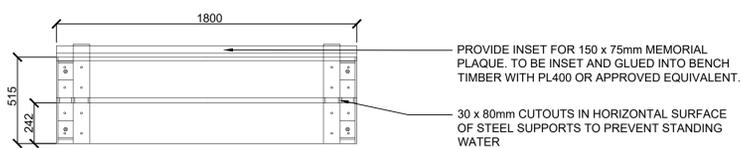
CONSULTANTS



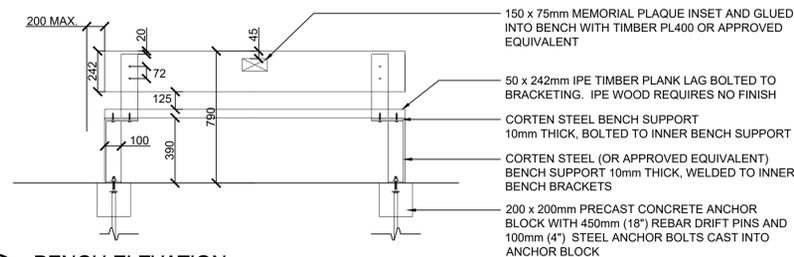
SEALS



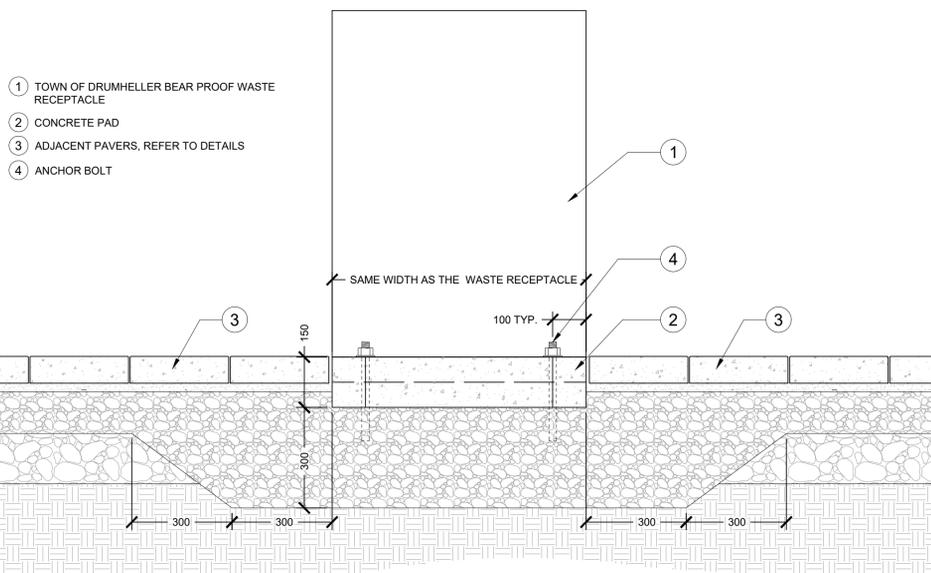
1 DINOSAUR THEMED BENCH WITH BACKREST
 1:20 P-O2-DRU-103



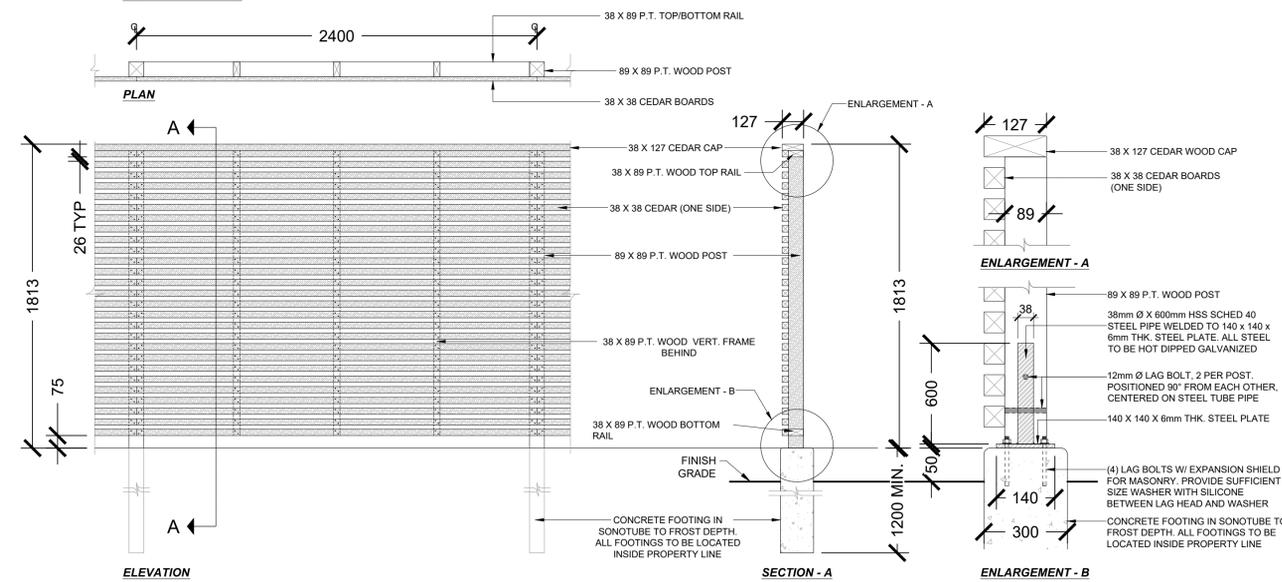
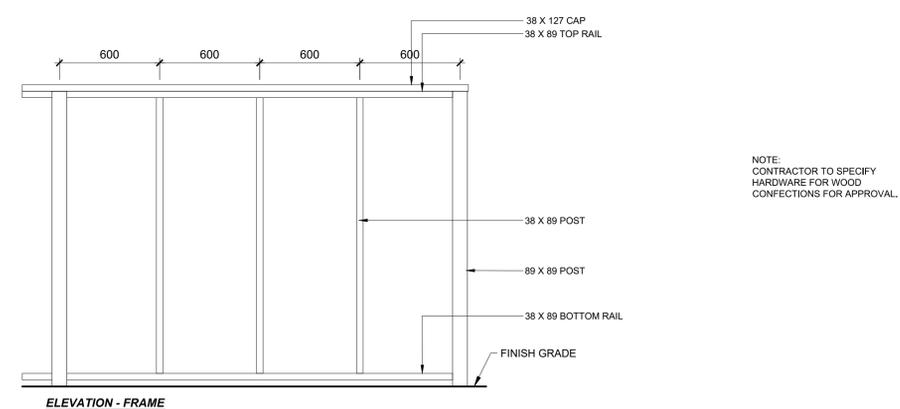
2 BENCH PLAN
 1:20 P-O2-DRU-104



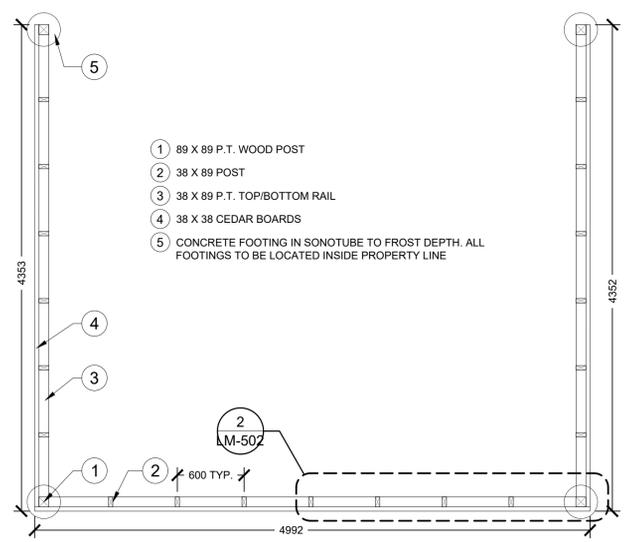
3 BENCH ELEVATION
 1:20 P-O2-DRU-105



4 WASTE RECEPTACLE
 1:10 P-O2-DRU-93



6 WASTE BIN ENCLOSURE FENCE
 1:20 P-O2-DRU-50



5 WASTE BIN ENCLOSURE FRAME LAYOUT
 1:30 P-O2-DRU-71



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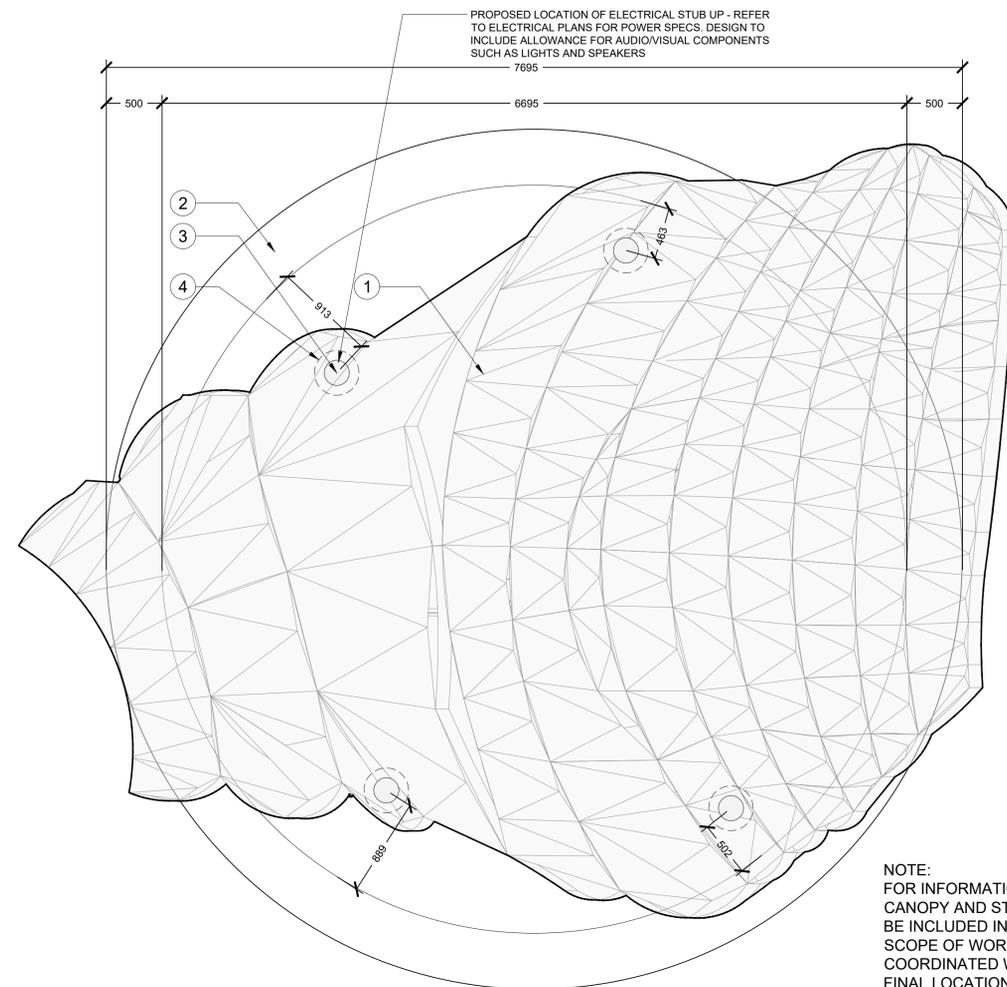


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SITE FURNITURE DETAILS

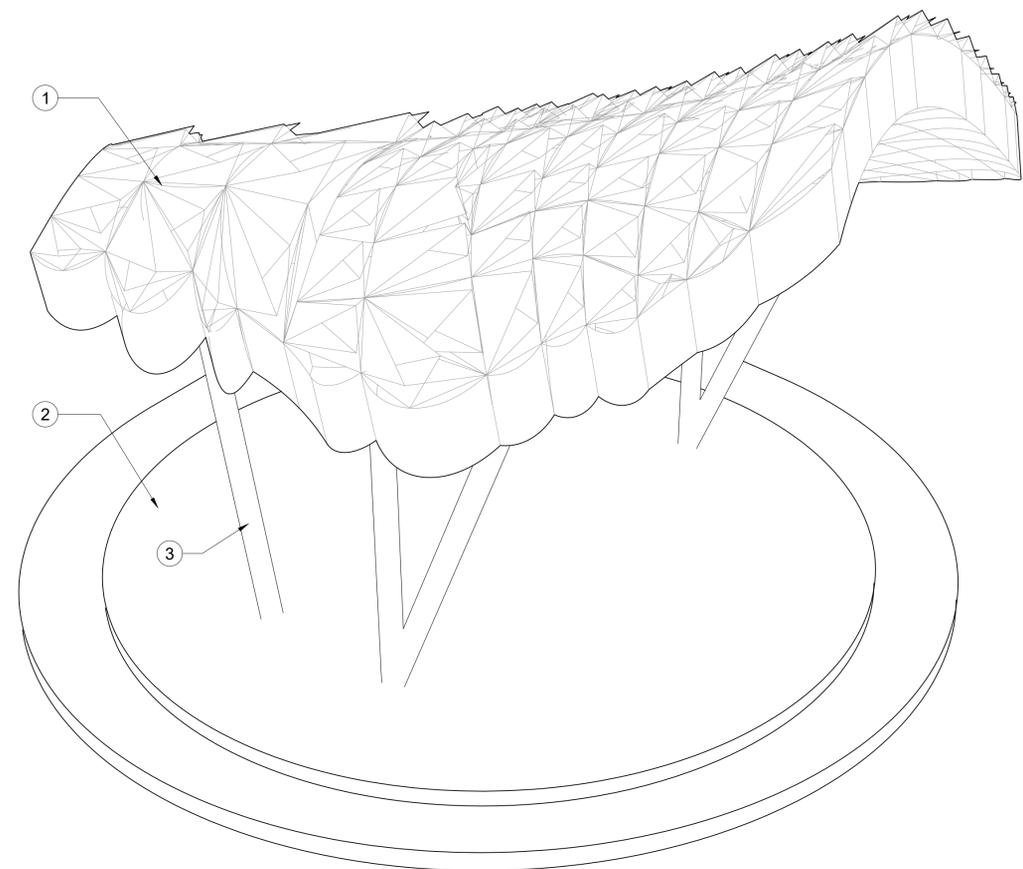
LM-502



SEALS

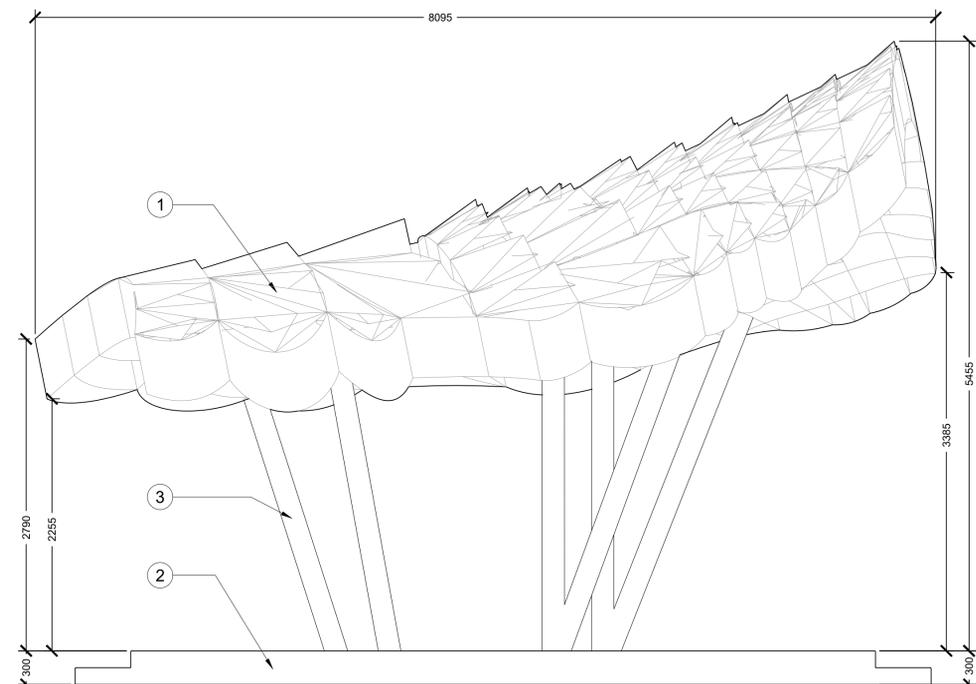


TOP VIEW

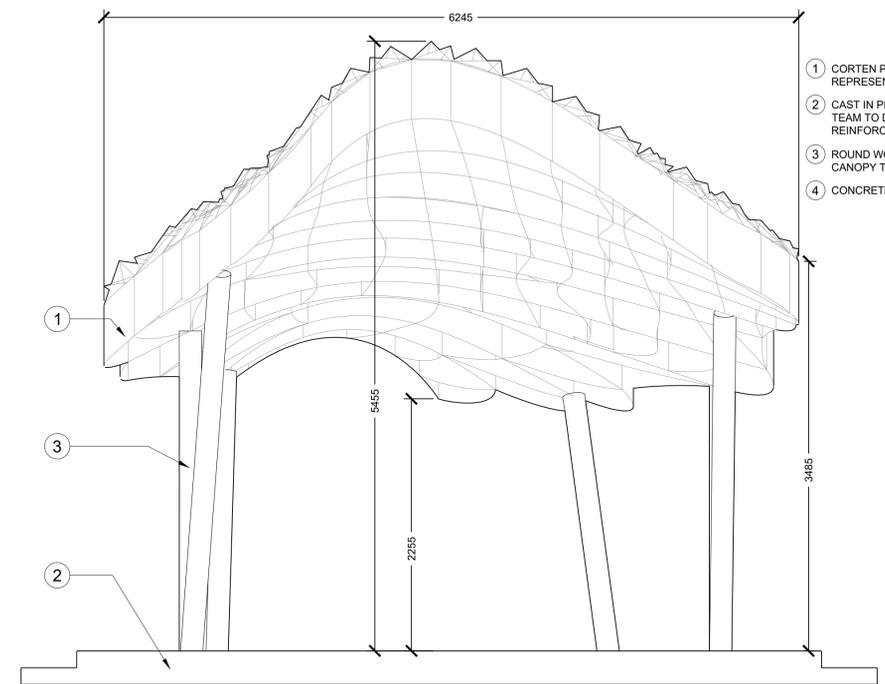


ISO VIEW

NOTE:
 FOR INFORMATION ONLY, OVERHEAD
 CANOPY AND STAGE PLATFORM DESIGN TO
 BE INCLUDED IN STAGE DESIGN BUILD
 SCOPE OF WORK. WORK TO BE
 COORDINATED WITH OTHER TRADES FOR
 FINAL LOCATIONS OF FOOTINGS, UTILITIES,
 SAWCUTS AND ANY REINFORCEMENT
 REQUIRED



SIDE ELEVATION



FRONT ELEVATION

- ① CORTEN PANELS - NOTCHED JOINTS TO CREATE A GRID REPRESENTING SCALES OF A DINOSAURS BACK
- ② CAST IN PLACE CONCRETE PLATFORM / FOOTING. DESIGN TEAM TO DETERMINE WHAT FOOTINGS / STRUCTURAL REINFORCEMENT IS REQUIRED
- ③ ROUND WOODEN POSTS ON ANGLES SECURING OVERHEAD CANOPY TO PLATFORM.
- ④ CONCRETE FOOTING



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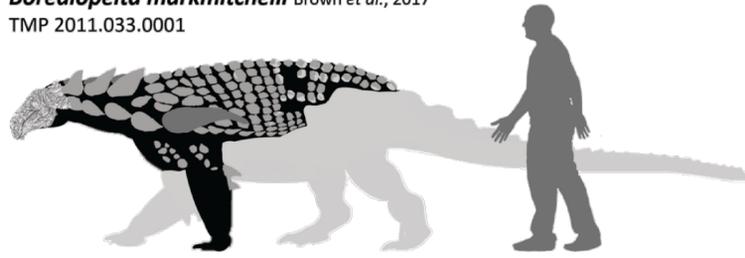
REVISIONS:	NO.	DESCRIPTION	DATE	BY
	1	ISSUED FOR TENDER	2022-02-15	

DESIGNED BY: ZW/MW CHECKED BY: MW



DRAWING TITLE:
SITE FEATURES DETAILS

Borealopelta markmitchelli Brown et al., 2017
 TMP 2011.033.0001



PRECEDENT A



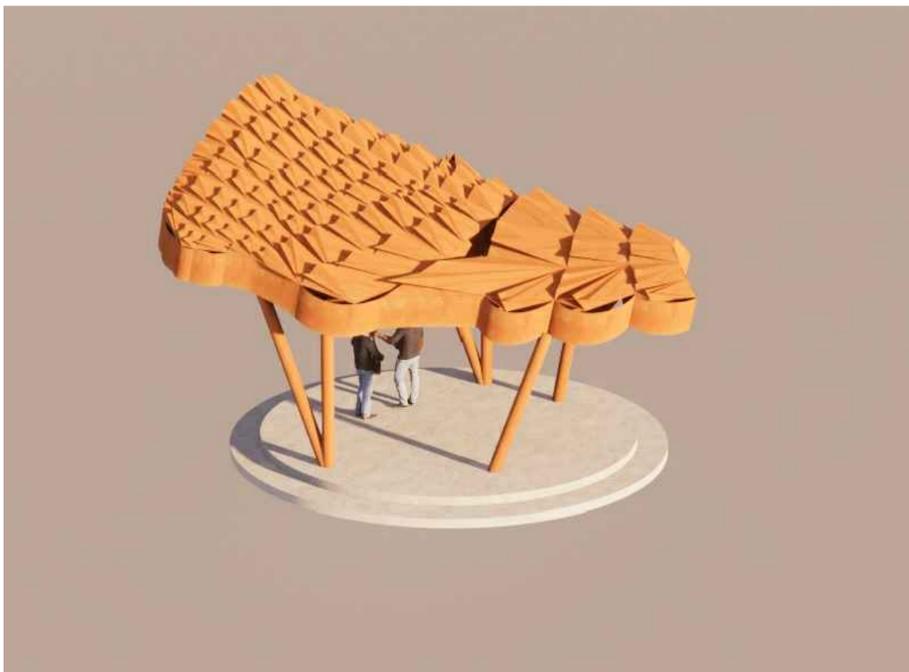
ISO VIEW



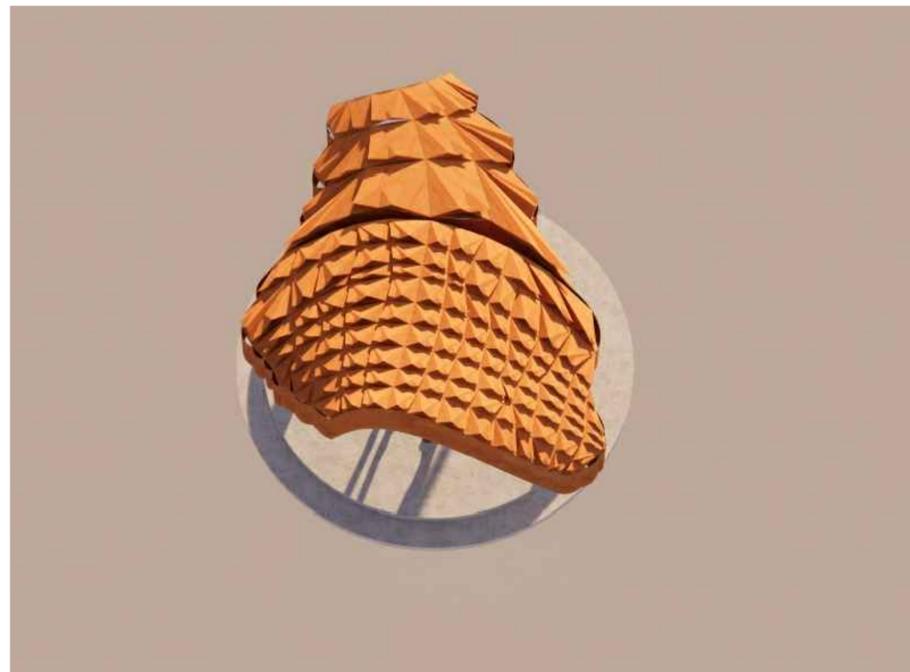
BACK VIEW



PRECEDENT B



SIDE VIEW



TOP VIEW



PRECEDENT C

CONSULTANTS



SEALS

KEYMAP



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1	ISSUED FOR TENDER	2022-02-15	

DESIGNED BY: ZW/MW CHECKED BY: MW



DRAWING TITLE:
SITE FEATURES DETAILS

LM-504

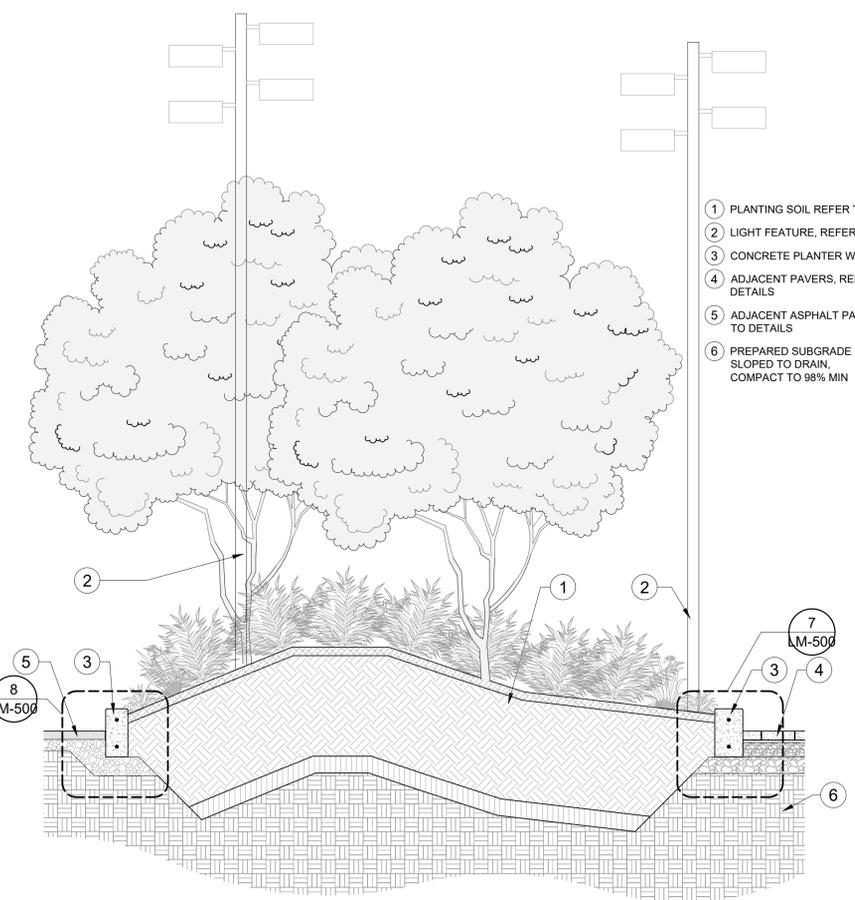
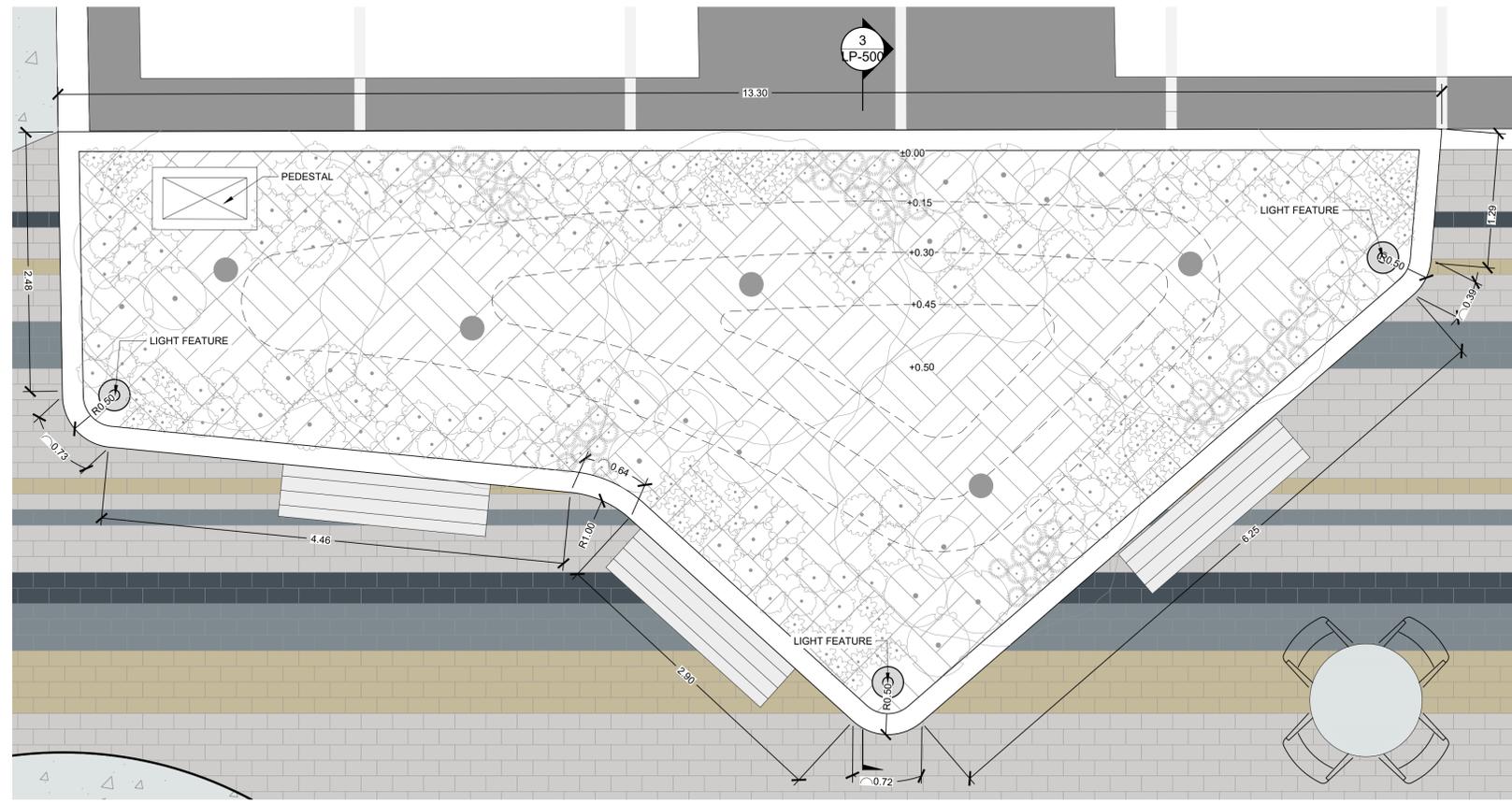
PROJECT
**DRUMHELLER
 DOWNTOWN PLAZA**
 FOR
 MUNICIPALITY OF DRUMHELLER

- 1 PLANTING SOIL REFER TO DETAIL
- 2 LIGHT FEATURE, REFER TO DETAILS
- 3 CONCRETE PLANTER WALL
- 4 ADJACENT PAVERS, REFER TO DETAILS
- 5 ADJACENT ASPHALT PAVING, REFER TO DETAILS
- 6 PREPARED SUBGRADE SLOPED TO DRAIN, COMPACT TO 98% MIN

CONSULTANTS

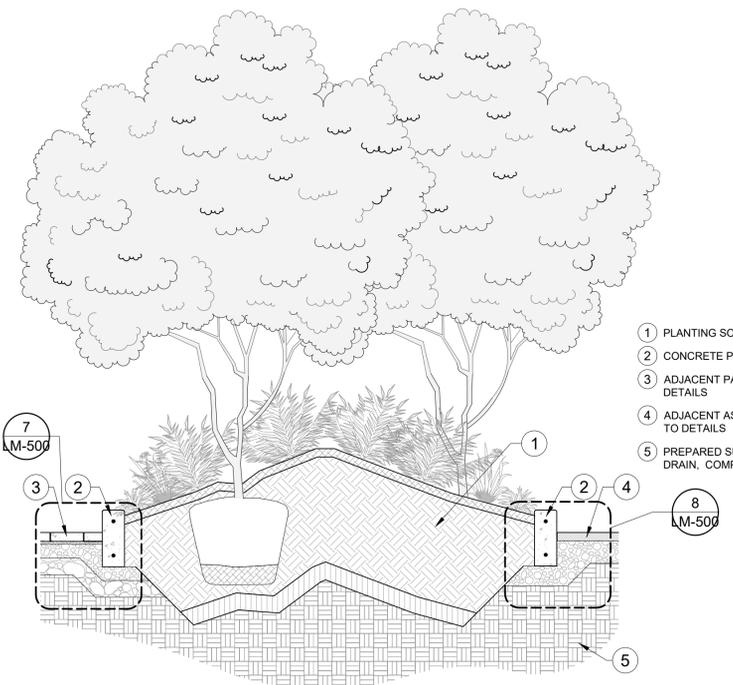
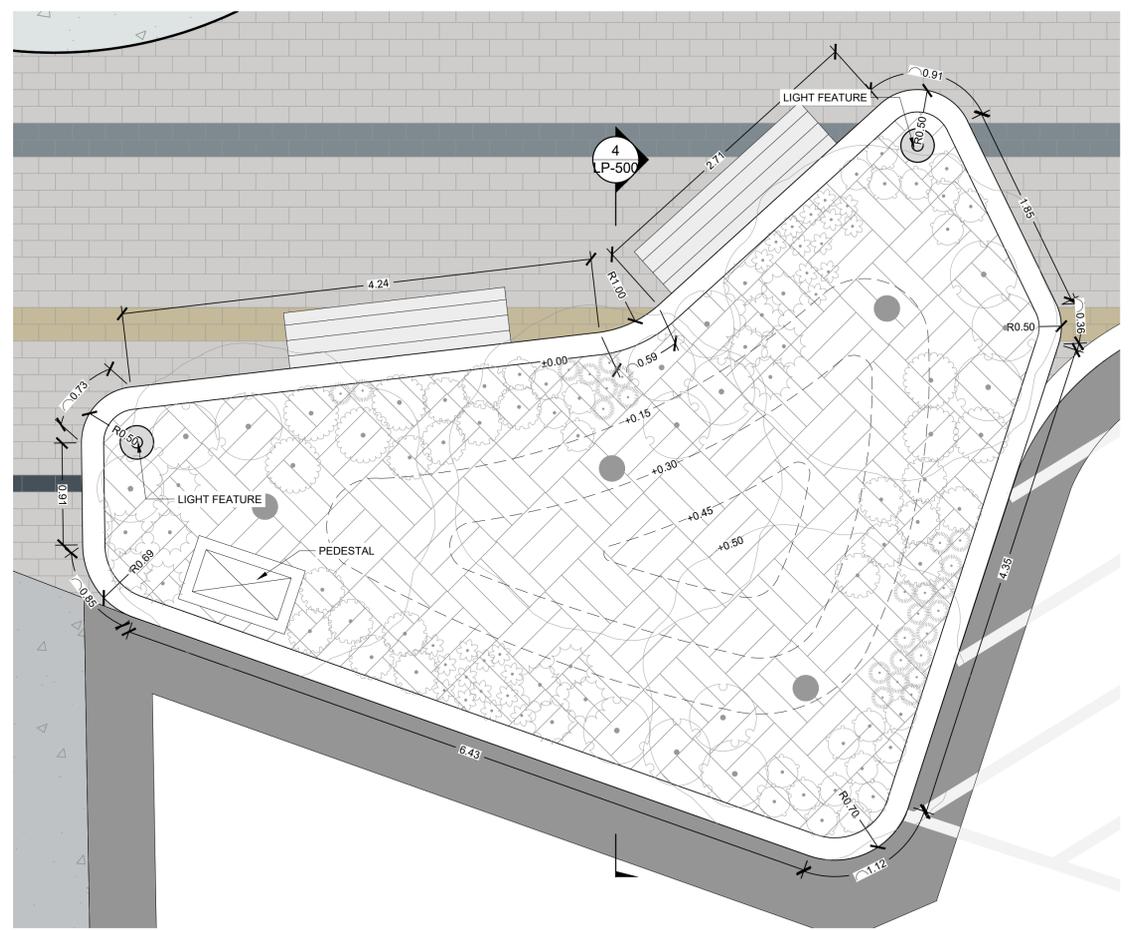


SEALS



1 PLANTER A - ZOOM IN PLAN
 1:30

3 PLANTER B SECTION
 1:30



2 PLANTER B - ZOOM IN PLAN
 1:30

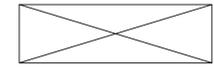
4 PLANTER A SECTION
 1:30



ISSUED FOR: TENDER
 DATE: 2022-02-15

REVISIONS:	NO.	DESCRIPTION	DATE	BY
	1	ISSUED FOR TENDER	2022-02-15	

DESIGNED BY: ZW/MW CHECKED BY: MW



DRAWING TITLE:
PLANTING DETAILS

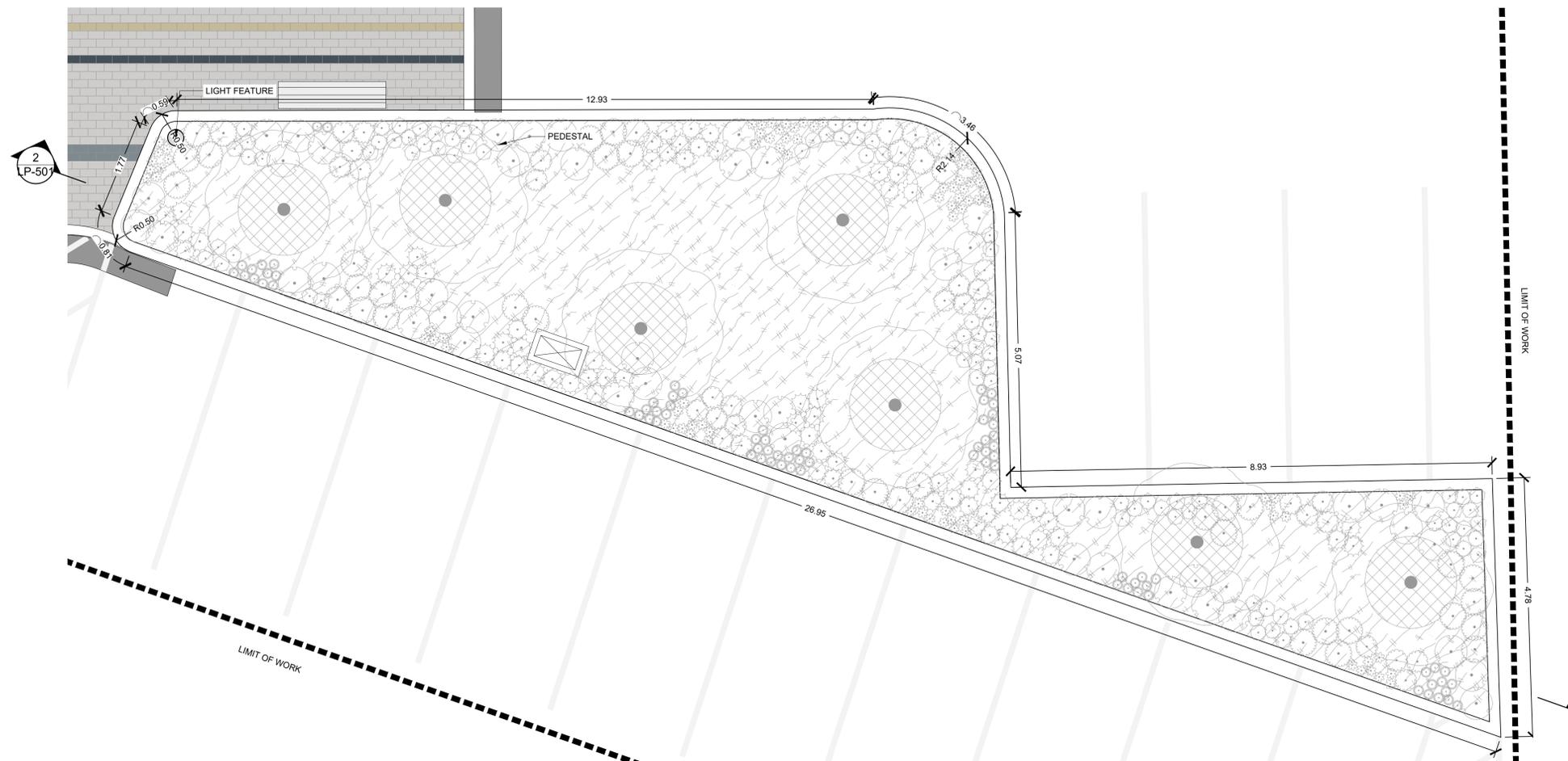
LP-500

PROJECT
**DRUMHELLER
 DOWNTOWN PLAZA**
 FOR
 MUNICIPALITY OF DRUMHELLER

CONSULTANTS



SEALS



1 EXISTING PLANTER - ZOOM IN PLAN

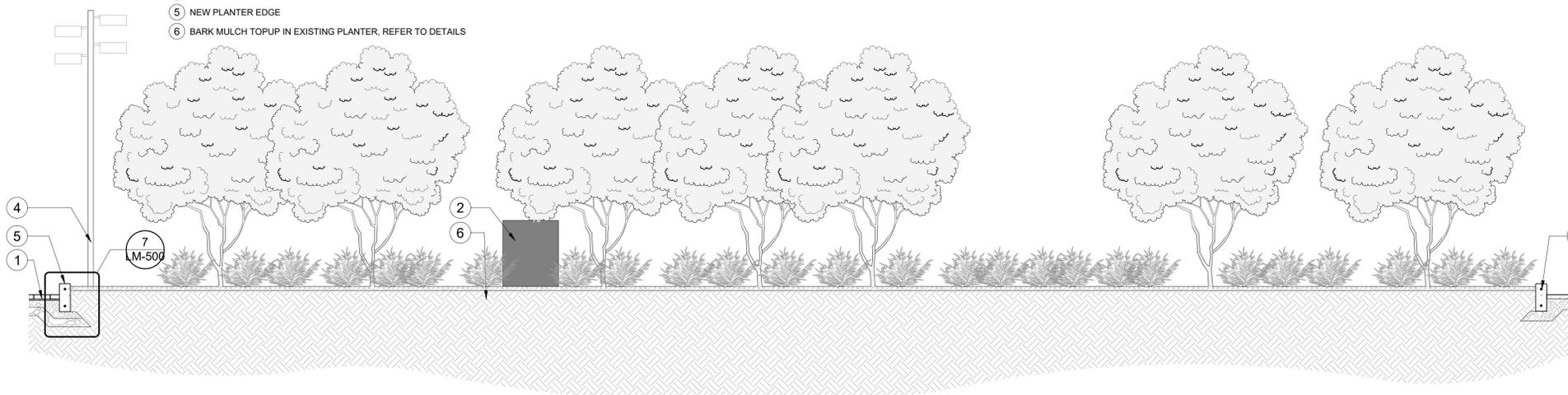
1:50

P-02-DRU-98

KEYMAP



- 1 ADJACENT PAVERS, REFER TO DETAILS
- 2 PEDESTAL, REFER TO ELECTRICAL
- 3 EXSITING PLANTER EDGE
- 4 LIGHT FEATURE, REFER TO DETAILS
- 5 NEW PLANTER EDGE
- 6 BARK MULCH TOPUP IN EXISTING PLANTER, REFER TO DETAILS



2 EXISTING PLANTER SECTION

1:50

P-02-DRU-106

ISSUED FOR: TENDER
 DATE: 2022-02-15

REVISIONS:
 NO. DESCRIPTION DATE BY

1 ISSUED FOR TENDER 2022-02-15

DESIGNED BY: ZW/MW CHECKED BY: MW



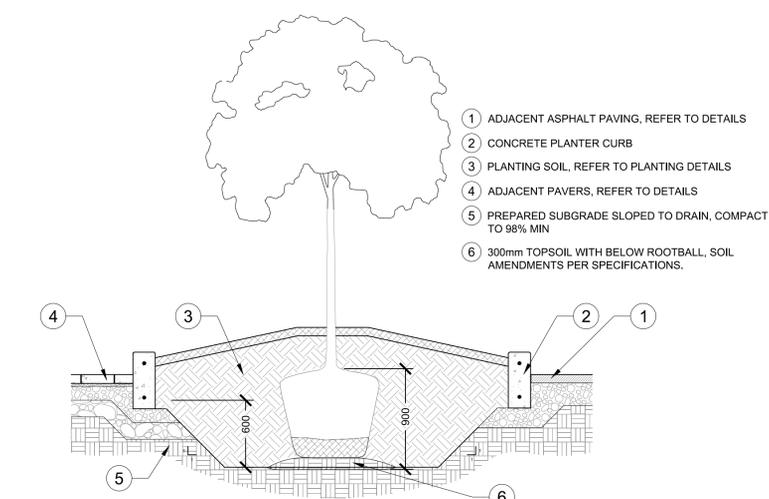
DRAWING TITLE:
PLANTING ENLARGEMENT

LP-501

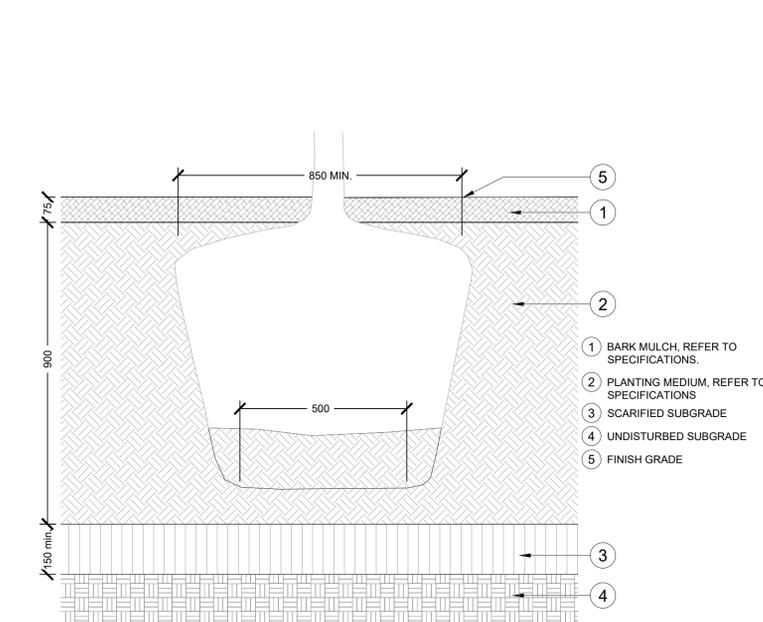
CONSULTANTS



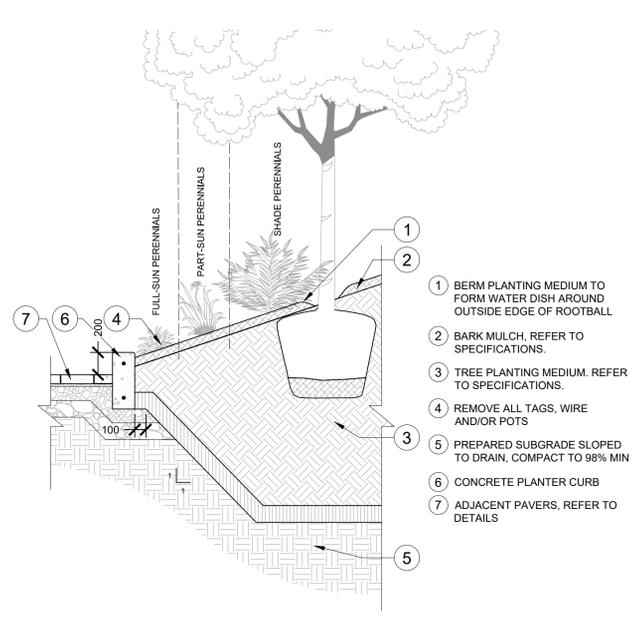
SEALS



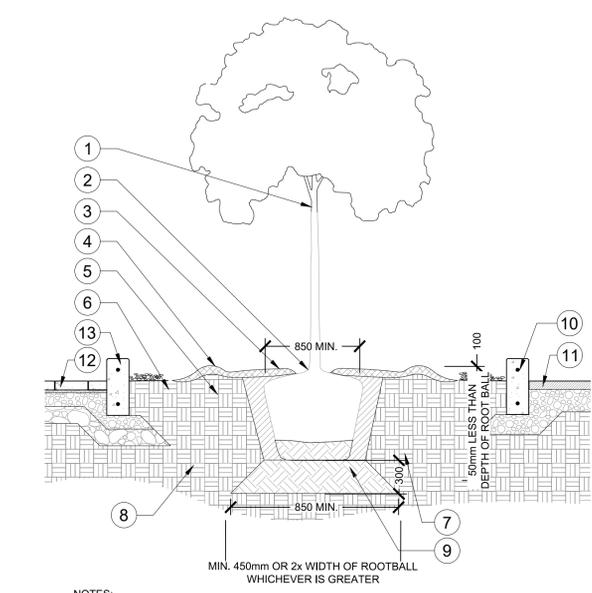
1 TREE PLANTING WITHIN NEW PLANTER
 1:30 P-02-DRU-41



3 SOIL ASSEMBLY IN NEW PLANTER
 1:10 P-02-DRU-82

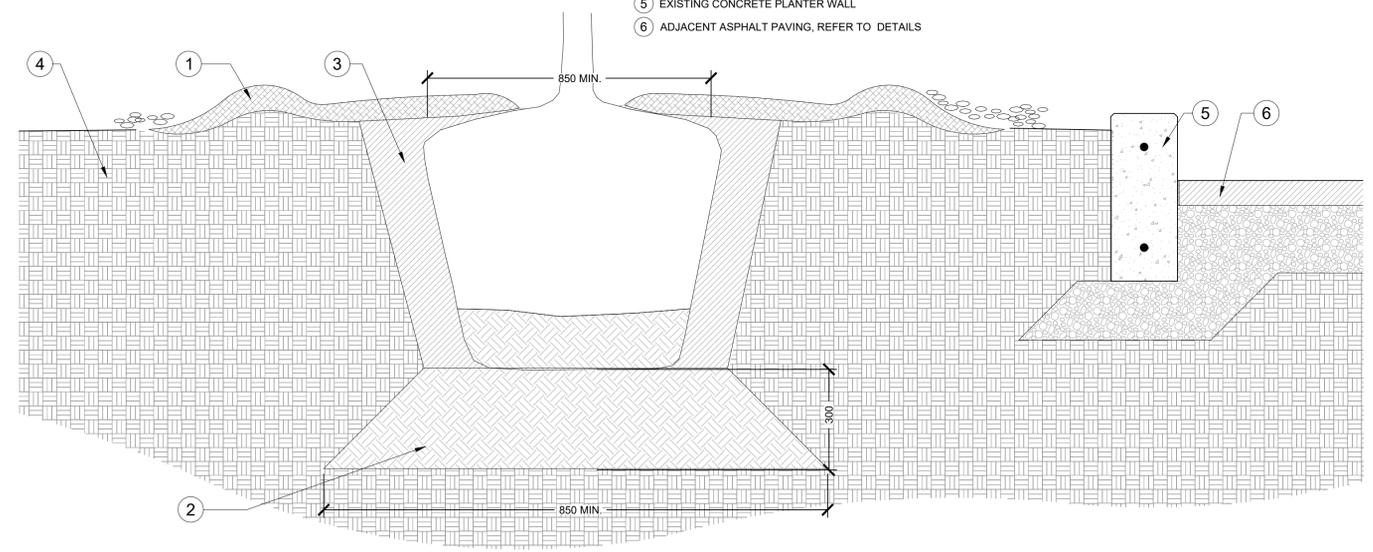


4 PERENNIAL PLANTING DETAIL
 1:30 P-02-DRU-09

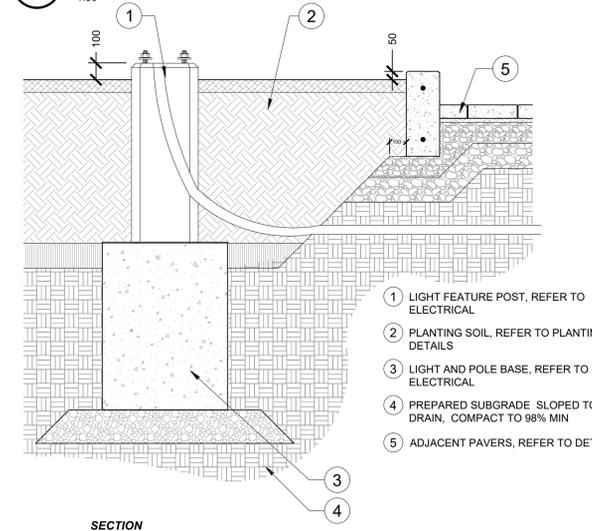


NOTES:
 1. WATER THOROUGHLY AFTER INSTALLATION
 2. REMOVE TREE RINGS AND STAKES TWO YEARS AFTER INSTALLATION
 3. DO NOT ALLOW AIR POCKETS TO FORM WHEN BACKFILLING
 4. POSITION CROWN OF ROOTBALL 50mm ABOVE FINISHED GRADE TO ALLOW FOR SETTLEMENT
 5. DO NOT DAMAGE OR CUT LEADER
 6. IF STAKING IS DEEMED NECESSARY REFER TO TREE STAKING DETAIL
 7. DO NOT WRAP TRUNK

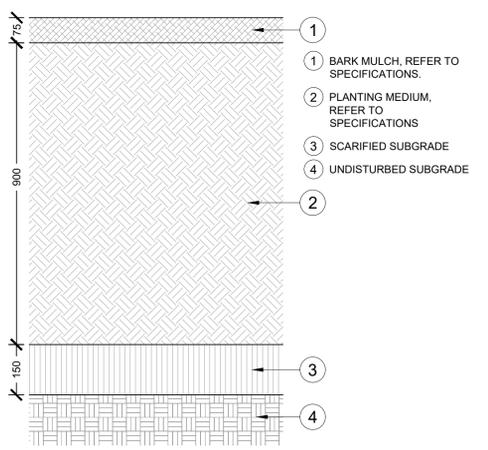
2 TREE PLANTING WITHIN EXISTING PLANTER
 1:30 P-02-DRU-35



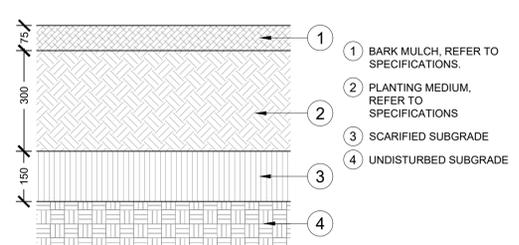
5 SOIL ASSEMBLY IN OLD PLANTER
 1:10 P-02-DRU-57



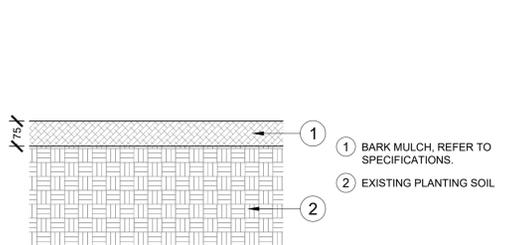
6 LIGHT POLE BASE IN PLANTER
 1:20 P-02-DRU-51



7 PLANTING SOIL TYPE 1
 1:10 P-02-DRU-95



8 PLANTING SOIL TYPE 2
 1:10 P-02-DRU-96



9 BARK MULCH TOPUP IN EXISTING PLANTER
 1:10 P-02-DRU-97



ISSUED FOR: TENDER
 DATE: 2022-02-15

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DESIGNED BY: ZW/MW CHECKED BY: MW



DRAWING TITLE:
PLANTING DETAILS

LP-502

LEGAL DESCRIPTION
 LOTS: 26,27,28
 BLOCK: 19
 PLAN: 3099 A.D.
 SE 11-29-20 W4M
 AREA: 0.113 Ha.

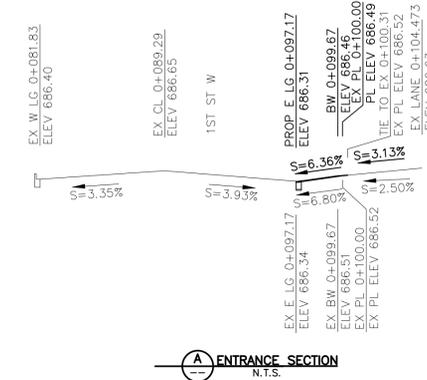
CONSTRUCTION AREA
 AREA: 0.14 Ha.

OWNER:
 MUNICIPALITY OF DRUMHELLER

NOTES:
 1. REFER TO DRAWING C1 FOR NOTES.
 2. MATERIALS SHOWN FOR REFERENCE ONLY. REFER TO O2 PLANNING AND DESIGN MATERIALS PLAN.

POINT DESCRIPTION LEGEND :

BW	BACK OF WALK
CB	CATCH BASIN
EC	EDGE CONCRETE
EG	EXISTING GROUND
FG	FINISHED GROUND
LG	LIP OF GUTTER
LP	LOW POINT
MH	MANHOLE
PV	PAVEMENT
TC	TOP CURB



LEGEND	
	EXISTING CONSTRUCTION BOUNDARY
	REMOVALS CURB TO BE REMOVED
	PROPOSED CURB & GUTTER
	PROPOSED CURB CROSSING
	PROPOSED CATCH BASIN
	PROPOSED TYPE 5A MANHOLE
	PROPOSED LAMP STANDARD
	PROPOSED WASTE BIN
	PROPOSED PLANTER
	PROPOSED TRANSFORMER
	PROPOSED BENCH
	PROPOSED LANDSCAPING
	PROPOSED HEAVY DUTY CONCRETE
	PROPOSED LIGHT DUTY CONCRETE
	PROPOSED PAVEMENT REPAIR

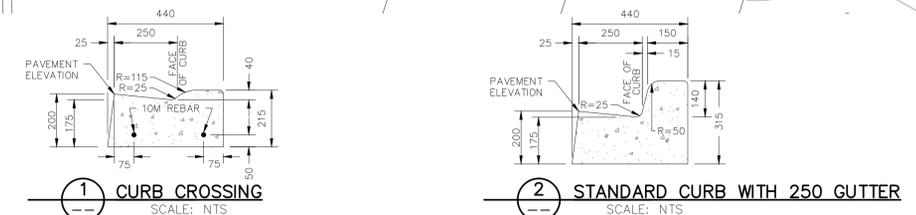
THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED (i.e. 1:1000 etc) ARE BASED ON 24"x36" FORMAT DRAWINGS

1	22-02-15	ISSUED FOR TENDER
ISSUE	YY-MM-DD	REVISION
PERMIT TO PRACTICE MPE ENGINEERING LTD. Signature _____ APEGA ID: 73165 Date FEB. 15, 2022 PERMIT NUMBER: P 3680 The Association of Professional Engineers and Geoscientists of Alberta (APEGA)		
 FEB. 15, 2022		



MUNICIPALITY OF DRUMHELLER

DRUMHELLER DOWNTOWN PLAZA
 SITE GRADING PLAN
 WITH OG CONTOURS



USER: D:\JOHNSON\2022\10_13_24_A.M.
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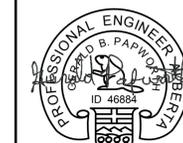
DESIGNED	D.M.J.	JOB	2728-011-00
DRAWN	D.M.J.	SCALE	1:150
DATE	AUG. 2021	DRAWING	C2

DISTRIBUTION	POWER CONTINUED	POWER EQUIPMENT CONTINUED	CONTROL PANEL EQUIPMENT CONTINUED
<p>CONDUIT IDENTIFICATION TAG</p> <p>LIGHTING/POWER PANEL</p> <p>DATA PANEL</p> <p>INTERCOM PANEL</p> <p>FIRE ANNUNCIATOR PANEL</p> <p>GROUND BAR</p> <p>PLYWOOD BACKBOARD</p> <p>EXTERIOR TRANSFORMER</p> <p>DRY TYPE TRANSFORMER</p> <p>METERING CABINET GREATER THAN 200A</p> <p>UTILITY METER PLAN</p> <p>POWER METER</p> <p>ELECTRIC UTILITY METER 200A AND LESS</p> <p>WATER METER</p> <p>GAS METER</p> <p>SPLITTER</p> <p>ELECTRICAL CENTRAL DISTRIBUTION PANEL (CDP)</p> <p>ELECTRICAL MOTOR CONTROL CENTRE (MCC)</p> <p>ELECTRICAL MAIN DISTRIBUTION BOARD</p> <p>TRANSFER SWITCH WITH BY-PASS</p> <p>TRANSFER SWITCH</p> <p>120/24V LOW VOLTAGE TRANSFORMER</p> <p>WEATHER HEAD</p>	<p>MAGNETIC MOTOR STARTER</p> <p>HOME RUN WITH WIRE COUNT</p> <p>WIRELESS ACCESS POINT</p> <p>ELECTRICAL HEATING</p> <p>HEAT TRACING</p> <p>PIN AND SLEEVE CONNECTOR (FEMALE)</p> <p>PIN AND SLEEVE CONNECTOR (MALE)</p> <p>SWITCHES AND JUNCTION BOXES</p> <p>LINE VOLTAGE SWITCH</p> <p>SWITCH C/W PILOT LIGHT</p> <p>TWO POLE SWITCH</p> <p>THREE WAY SWITCH</p> <p>FOUR WAY SWITCH</p> <p>MANUAL MOTOR PROTECTION SWITCH C/W PILOT LIGHT</p> <p>KEY OPERATED SWITCH - CYLINDER TYPE</p> <p>TIMER SWITCH</p> <p>DIMMER SWITCH - SLIDER TYPE</p> <p>INTERNALLY ILLUMINATED LIGHT SWITCH</p> <p>LOW VOLTAGE SWITCH</p> <p>2 GANG SWITCH</p> <p>3 GANG SWITCH</p> <p>4 GANG SWITCH</p> <p>5 GANG SWITCH</p> <p>WALL MOUNTED PHOTOCELL</p> <p>WALL MOUNTED JUNCTION BOX</p> <p>FLOOR MOUNTED JUNCTION BOX</p> <p>SQUARE CEILING MOUNTED JUNCTION BOX</p> <p>THERMOSTAT</p> <p>NON-FUSEABLE DISCONNECT SWITCH</p> <p>FUSEABLE DISCONNECT SWITCH</p> <p>COMBINATION MAGNETIC HOA STARTER</p> <p>O/H DOOR PUSH BUTTON</p> <p>PULL BOX</p> <p>LIFE SAFETY</p> <p>CEILING MOUNTED EXIT LIGHT SINGLE FACE</p> <p>CEILING MOUNTED EXIT LIGHT DOUBLE FACE</p> <p>CEILING COMBINATION EXIT SIGN AND EMERGENCY LIGHT C/W BATTERY</p> <p>WALL MOUNTED EXIT LIGHT SINGLE FACE</p> <p>WALL MOUNTED EXIT LIGHT DOUBLE FACE</p> <p>WALL COMBINATION EXIT SIGN AND EMERGENCY LIGHT C/W BATTERY</p> <p>EXIT LIGHT DIRECTIONAL ARROW</p> <p>WALL MOUNTED EMERGENCY LIGHTING BATTERY PACK</p> <p>CEILING MOUNTED EMERGENCY LIGHTING DOUBLE REMOTE HEAD</p> <p>CEILING MOUNTED EMERGENCY LIGHTING RECESSED REMOTE HEAD</p> <p>WALL MOUNTED EMERGENCY LIGHTING DOUBLE REMOTE HEAD</p> <p>SMOKE DETECTOR</p> <p>SMOKE ALARM</p> <p>POWER EQUIPMENT</p> <p>DELTA WYE TRANSFORMER</p> <p>DISTRIBUTION TRANSFORMER</p> <p>POTENTIAL TRANSFORMER</p> <p>FUSE DRAW OUT TYPE</p> <p>CIRCUIT BREAKER DRAW OUT TYPE</p> <p>3 PHASE GENERATOR (GROUNDED)</p> <p>THERMAL OVERLOAD PROTECTION</p> <p>INTERLOCK</p> <p>CAPACITOR</p> <p>CURRENT METER</p> <p>CONTACTOR</p> <p>FUSE</p> <p>DISCONNECT SWITCH</p> <p>FUSED DISCONNECT SWITCH</p> <p>FRAME SIZE</p> <p>CIRCUIT BREAKER TRIP RATING</p> <p>POLE</p> <p>ELAPSED TIME METER</p> <p>GROUND ROD</p> <p>GROUND ROD C/W WELL</p> <p>GROUND ROD WITHOUT WELL</p> <p>GATE HOIST</p>	<p>HEATER C/W KILOWATT RATING</p> <p>MOTOR CONTROL IDENTIFICATION TAG</p> <p>TRANSFER SWITCH</p> <p>SECURITY</p> <p>WALL MOUNTED SECURITY KEYPAD</p> <p>WALL MOUNTED CARD READER</p> <p>WALL MOUNTED MOTION SENSOR</p> <p>WALL MOUNTED CCTV CAMERA - FIXED</p> <p>WALL MOUNTED CCTV CAMERA - PAN, TILT, ZOOM</p> <p>WALL MOUNTED CCTV CAMERA - FUTURE</p> <p>CEILING MOUNTED CCTV CAMERA - FIXED</p> <p>CEILING MOUNTED CCTV CAMERA - PAN, TILT, ZOOM</p> <p>CEILING MOUNTED CCTV CAMERA - FUTURE</p> <p>MAGNETIC DOOR LOCK</p> <p>MAGNETIC DOOR HOLD OPEN DEVICE</p> <p>DOOR POSITION SWITCH (DOOR CONTACT)</p> <p>ELECTRIC STRIKE</p> <p>BREAK GLASS SENSOR</p> <p>SONALERT BUZZER</p> <p>COMMUNICATIONS</p> <p>WALL MOUNTED TELEPHONE OUTLET</p> <p>WALL MOUNTED DATA OUTLET</p> <p>WALL MOUNTED COMBINATION TELEPHONE/DATA OUTLET</p> <p>WALL MOUNTED TELEVISION OUTLET</p> <p>WALL MOUNTED CHIME OR BUZZER</p> <p>CEILING MOUNTED TELEPHONE OUTLET</p> <p>CEILING MOUNTED COMBINATION TELEPHONE/DATA OUTLET</p> <p>CEILING MOUNTED TELEVISION OUTLET</p> <p>CEILING MOUNTED DATA OUTLET (No. OF OUTLETS)</p> <p>FLOOR MOUNTED TELEPHONE OUTLET (No. OF OUTLETS)</p> <p>FLOOR MOUNTED TELEVISION OUTLET (No. OF OUTLETS)</p> <p>FLOOR MOUNTED COMBINATION TELEPHONE/DATA OUTLET (No. OF OUTLETS)</p> <p>RADIO LINK</p> <p>CONTROL PANEL EQUIPMENT</p> <p>RESET PUSH BUTTON (NO)</p> <p>RESET PUSH BUTTON (NC)</p> <p>MUSHROOM HEAD STOP</p> <p>3 POSITION SELECTOR SWITCH</p> <p>2 POSITION SELECTOR SWITCH</p> <p>HAND-OFF-AUTO SELECTOR SWITCH</p> <p>UP-OFF-DOWN SELECTOR SWITCH</p> <p>RESET PUSH BUTTON</p> <p>AMBER PILOT LIGHT</p> <p>GREEN PILOT LIGHT</p> <p>RED PILOT LIGHT</p> <p>DUPLEX RECEPTACLE</p> <p>SINGLE PHASE PLUG</p> <p>MAIN CONTROL PANEL FUSED TERMINAL BLOCK</p> <p>AUXILIARY FUSED TERMINAL BLOCK</p> <p>CIRCUIT BREAKER</p> <p>MAIN CONTROL PANEL TERMINAL BLOCK</p> <p>PLC/RTU TERMINAL</p> <p>AUXILIARY TERMINAL BLOCK</p> <p>MCC/VFD TERMINAL BLOCK</p> <p>DEVICE TERMINAL BLOCK</p> <p>DRY CONTACT RELAY</p> <p>TIME DELAY RELAY</p> <p>MAGNETIC CONTACTOR</p> <p>SOLENOID</p>	<p>DRY CONTACT RELAY (NC)</p> <p>DRY CONTACT RELAY (NO)</p> <p>VARIABLE RESISTOR</p> <p>RESISTOR</p> <p>THERMISTOR</p> <p>DIODE</p> <p>METAL OXIDE VARISTOR</p> <p>INSTRUMENTATION EQUIPMENT</p> <p>LEVEL SWITCH (OPEN ON RISING LEVEL)</p> <p>LEVEL SWITCH (OPEN ON FALLING LEVEL)</p> <p>FLOW SWITCH (OPEN ON RISING FLOW)</p> <p>FLOW SWITCH (OPEN ON FALLING FLOW)</p> <p>PRESSURE SWITCH (OPEN ON RISING PRESSURE)</p> <p>PRESSURE SWITCH (OPEN ON FALLING PRESSURE)</p> <p>TEMPERATURE SWITCH (OPEN ON RISING TEMPERATURE)</p> <p>TEMPERATURE SWITCH (OPEN ON FALLING TEMPERATURE)</p> <p>LIMIT SWITCH (NC)</p> <p>LIMIT SWITCH (NO)</p> <p>TIME DELAY RELAY (NC)</p> <p>TIME DELAY RELAY (NO)</p> <p>INSTRUMENTATION IDENTIFICATION TAG</p> <p>PLC I/O</p> <p>PLC/RTU DIGITAL INPUT</p> <p>PLC/RTU DIGITAL OUTPUT</p> <p>PLC/RTU ANALOG INPUT</p> <p>PLC/RTU ANALOG OUTPUT</p> <p>MISCELLANEOUS AND LABELS</p> <p>REVISION NUMBER</p> <p>FIXTURE TYPE</p> <p>MECHANICAL EQUIPMENT IDENTIFICATION TAG</p> <p>KITCHEN EQUIPMENT TAG</p> <p>KEY NOTES</p> <p>SINGLE LINE BREAK</p> <p>DOUBLE LINE BREAK</p> <p>CAPPED OFF LINE OR CONDUIT</p> <p>CONDUIT BREAK</p> <p>CABLE TRAY</p> <p>INSTALL ABOVE COUNTER</p> <p>INSTALL BUILT INTO OR UNDER MILLWORK</p> <p>DISH WASHER</p> <p>FRIDGE</p> <p>RANGE</p> <p>MICROWAVE</p> <p>GARBURATOR</p> <p>DRYER</p> <p>WASHER</p> <p>NIGHT LIGHT</p> <p>GROUND FAULT CIRCUIT INTERRUPTER</p> <p>ISOLATED GROUND</p> <p>EMERGENCY</p> <p>AMP FRAME</p> <p>AMP TRIP</p> <p>WEATHER PROOF</p> <p>EXPLOSION PROOF</p> <p>EXISTING DEVICE TO REMAIN</p> <p>EXISTING DEVICE TO BE REMOVED</p> <p>EXISTING DEVICE TO BE RELOCATED</p> <p>RELOCATED DEVICE</p> <p>WIRE COUNT</p> <p>CONDUIT RUN UP</p> <p>CONDUIT RUN DOWN</p> <p>OVERHEAD POWER</p> <p>UNDERGROUND POWER</p> <p>CONDUCTOR/CONDUIT</p> <p>UNDERGROUND CONDUCTOR/CONDUIT</p> <p>FLEXIBLE CONDUIT</p> <p>EXISTING EQUIPMENT</p> <p>NEW EQUIPMENT</p> <p>EQUIPMENT TO BE REMOVED</p>

- NOTES:
- ALL BOLD ITEMS INDICATE WORK TO BE DONE AND ALL LIGHT ITEMS INDICATE EXISTING CONDITIONS.
 - ALL DIMENSIONS ARE SHOWN IN MILLIMETRES UNLESS OTHERWISE INDICATED.

THE EXISTENCE, LOCATION AND ELEVATION OF ALL UTILITIES AS SHOWN ON ANY PLANS MAY BE BASED ON INFORMATION RECEIVED FROM THE RESPECTIVE AUTHORITIES AND ARE NOT GUARANTEED BY THE ENGINEER. NO RESPONSIBILITY IS IMPLIED OR ASSUMED BY THE ENGINEER AS TO THE LOCATION AND ELEVATION OR ANY OMISSIONS. THE CONTRACTOR OR ANY THIRD-PARTY IS RESPONSIBLE FOR DETERMINING THE EXISTENCE, LOCATION AND ELEVATION OF ALL SUCH UTILITIES AND MUST CONTACT THE VARIOUS UTILITY COMPANIES FOR ON SITE INFORMATION PRIOR TO COMMENCEMENT OF ANY OPERATIONS.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED (i.e. 1:1000 etc) ARE BASED ON 24"x36" FORMAT DRAWINGS

1	22-02-15	ISSUED FOR TENDER
ISSUE	YY-MM-DD	REVISION
PERMIT TO PRACTICE MPE ENGINEERING LTD. Signature: <i>Gerald Papworth</i> APEGA ID: 46884 Date: FEB. 15, 2022 PERMIT NUMBER: P 3680 The Association of Professional Engineers and Geoscientists of Alberta (APEGA)		
		



MUNICIPALITY OF DRUMHELLER

DRUMHELLER DOWNTOWN PLAZA
ELECTRICAL
ELECTRICAL LEGEND

DESIGNED	M.T.F., G.B.P.	JOB	2728-011-00
DRAWN	Y.F.S., M.T.F.	SCALE	NTS
DATE	JANUARY 2022	DRAWING	E.O.1

BASIC ELECTRICAL REQUIREMENTS

1. REGULATORY REQUIREMENTS

- 1.1. COMPLY WITH SAFETY CODES ACT AND RULES AND REGULATIONS MADE PURSUANT THERE TO INCLUDING THE CANADIAN ELECTRICAL CODE.
- 1.2. RECORD ACTUAL LOCATIONS AT ALL PULL BOXES, PANEL BOARDS, LUMINARIES, FEEDERS, ELECTRICAL EQUIPMENT AND ELECTRICAL SITE SERVICES.

2. GENERAL

- 2.1. DURING START-UP ASSIST OWNER'S REPRESENTATIVE IN DEBUGGING SYSTEM OPERATION AND CORRECT ANY DEFICIENCIES AND OMISSIONS WHICH APPEAR.

3. ELECTRICAL IDENTIFICATION

- 3.1. LAMACOID NAMEPLATES: 3mm THICK PLASTIC ENGRAVING SHEET, BLACK FACE, WHITE CORE, MECHANICALLY ATTACHED, SIZES AS FOLLOWS:
 - 3.1.1. SIZE 1: 12mm HIGH WITH 5mm HIGH LETTERS.
 - 3.1.2. SIZE 2: 20mm HIGH WITH 8mm HIGH LETTERS.
 - 3.1.3. SIZE 3: 25mm HIGH WITH 12mm HIGH LETTERS.
- 3.2. COLOUR IDENTIFICATION OF WIRING:
 - 3.2.1. IDENTIFY No.2 AWG WIRING AND SMALLER BY CONTINUOUS INSULATION COLOUR.
 - 3.2.2. IDENTIFY WIRING LARGER THAN No.2 AWG BY CONTINUOUS INSULATION COLOUR OR BY COLOUR BANDING TAPE APPLIED AT EACH END AND AT SPLICES.
 - 3.2.3. MAINTAIN PHASE SEQUENCE AND COLOUR CODING THROUGHOUT EACH SYSTEM.
- 3.3. COLOUR CODING SHALL BE IN ACCORDANCE WITH CANADIAN ELECTRICAL CODE, AND AS FOLLOWS:

VOLTAGE	COLOUR
1. 120/208 V 3 PHASE:	RED, BLACK AND BLUE
2. 120/208 V EMERGENCY:	RED, BLACK AND BLUE WITH YELLOW TRACER
- 3.4. EQUIPMENT IDENTIFICATION SCHEDULE

	EQUIPMENT	SIZE
.1	MCCS	3
.2	ALL COMPARTMENTS ON MCCS	2
.3	LBTS	1
.4	HOA SWITCHES FOR EXHAUST FANS	1
.5	THERMOSTATS AND DEHUMIDISTATS	1
.6	ALL INSTRUMENTS AND EQUIPMENT SMALLER THAN 300mmx300mmx300mm, LISTED IN SECTION 13312 AND PBI DRAWINGS	1
.7	ALL INSTRUMENTS AND EQUIPMENT SMALLER THAN 300mmx300mmx300mm, LISTED IN SECTION 13312 AND PBI DRAWINGS	2
.8	ALL HVAC EQUIPMENT	3
.9	ALL ELECTRICAL PANELS	2
.10	JUNCTION BOXES OVER 100mmx100mm	1

3.5. WIRE IDENTIFICATION

- 3.5.1. POWER WIRING FROM ELECTRICAL PANELS TO BE LABELED WITH PANEL IDENTIFICATION AND CIRCUIT NUMBER (EG: PNL A1 CCT 7).
- 3.5.2. CONTROL WIRING TO BE LABELED WITH TERMINAL LABELS AS SHOWN ON PLC WIRING DIAGRAMS (EG: F301, 301C, F1203, 1203, F144, 144N, F152, 152R)

4. WIRE AND CABLE

- 4.1. ALL WIRING TO BE RUN IN CONDUIT. TECK CABLE CAN BE AN ALTERNATIVE TO CONDUIT AND WIRE. TECK CABLE TO BE INSTALLED IN TRAY OR OTHER EQUIVALENT SUPPORT.
- 4.2. BUILDING WIRE TO CSA C22.2 No. 75-M1983, COPPER CONDUCTOR, 600V RW90 X-LINK INSULATION. USE IN ALL LOCATIONS.
- 4.3. TECK 90 CABLE TO CSA C22.2 No.131-M89
- 4.4. WIRE SIZES ACCORDING TO CEC EXCEPT WHERE OTHERWISE INDICATED. MINIMUM WIRE SIZE SHALL BE AWG 12 FOR POWER CIRCUITS.
- 4.5. DO NOT USE METALLIC OR NONMETALLIC SHEATHED CABLES OR WIRE WITH ALUMINUM CONDUCTORS, EXCEPT WHERE SPECIFIED OR INDICATED ON DRAWINGS.
- 4.6. REMOTE CONTROL AND SIGNAL CABLE:
 - 4.6.1. CONDUCTOR: COPPER
 - 4.6.2. INSULATION: 300V INSULATION, RATED 60° C
 - 4.6.3. CONFIGURATION: INDIVIDUAL CONDUCTORS COVERED WITH A PVC JACKET.

5. CONDUIT

5.1. INSTALLATION ON CONDUIT, GENERAL

- 5.1.1. FOR EXISTING BUILDINGS AND NEW PRE-FABRICATED BUILDINGS, CONDUIT SHALL BE SURFACE MOUNTED ON WALLS AND CEILINGS.
- 5.1.2. FOR NEW BUILDINGS WITH MASONRY EXTERNAL WALLS, CONDUIT CAN BE SURFACE MOUNTED TO THE INTERIOR OR THE WALL. FOR INTERNAL STUDDED WALLS, CONDUIT IS TO BE CONCEALED IN THE WALL.
- 5.1.3. CONDUIT ON THE OUTER EXTERIOR WALLS IS TO BE AVOIDED. WHERE CONDUIT IS NECESSARY ON THE OUTER EXTERIOR, THE AMOUNT IS TO BE MINIMIZED.
- 5.1.4. CONDUIT SYSTEM SHALL BE WEATHERPROOF FOR OUTDOOR AREAS AND FOR INDOOR AREAS WITH PROCESS PIPING.
- 5.1.5. EMT WITH RAIN TIGHT FITTINGS WILL BE ALLOWED WHERE IT IS NOT SUBJECT TO MECHANICAL INJURY SUCH AS ALONG WALLS AND ABOVE 1200mm FROM WALKWAY SURFACE. WHERE A CONDUIT MAY BE STEPPED ON OR BUMPED DURING TYPICAL OPERATION AND MAINTENANCE, RIGID METAL CONDUIT SHALL BE USED.
- 5.1.6. CONDUIT SHALL BE RIGID PIPE WITH PROPER SUPPORT EXCEPT FOR FINAL CONNECTION TO FIELD INSTRUMENTS. THE FINAL 500mm CONDUIT CONNECTION INTO FIELD INSTRUMENTS AND EQUIPMENT SHALL BE LIQUID TIGHT FLEXIBLE METAL. THIS IS TO ALLOW EASY DISCONNECTION AND REPLACEMENT OF THE DEVICE WHEN REQUIRED.
- 5.1.7. PLUG CONDUIT ENDS TO PREVENT ENTRY OF DIRT AND MOISTURE.
- 5.1.8. SEAL CONDUIT WITH DUCT SEAL COMPOUND OR FIBERGLASS WHERE CONDUIT LEAVES HEATED AREA AND ENTERS UNHEATED AREA.
- 5.1.9. PROVIDE NECESSARY FLASHING AND PITCHPOCKETS, MAKING WATERTIGHT JOINTS WHERE CONDUIT PASSES THROUGH ROOF OR WATERPROOFING MEMBRANES.
- 5.1.10. WHERE CONDUIT CROSSES BUILDING EXPANSION JOINTS, INSTALL EXPANSION FITTING APPROVED BY AUTHORITY HAVING JURISDICTION. COMPLETE WITH GROUNDING JUMPER. PROVIDE BEND OR OFFSET IN CONDUIT ADJACENT TO BUILDING EXPANSION JOINT WHERE CONDUIT IS INSTALLED ABOVE SUSPENDED CEILINGS.

5.2. INSTALLATION OF NON-METALLIC CONDUIT

- 5.2.1. MAKE FIELD BENDS AND SOLVENT CEMENTED JOINTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

5.3. INSTALLATION OF EXPOSED AND SEMI-CONCEALED CONDUIT

- 5.3.1. INSTALL CONDUIT TO CONSERVE HEADROOM AND CAUSE MINIMUM INTERFERENCE IN SPACES THROUGH WHICH CONDUIT PASSES.
- 5.3.2. INSTALL CONDUIT SO AS NOT TO INTERFERE WITH CEILING INSERTS, LUMINARIES OR VENTILATION DUCTS OR OUTLETS.
- 5.3.3. ALTER ROUTING TO AVOID STRUCTURAL OBSTRUCTIONS, KEEPING CROSSOVERS TO A MINIMUM.
- 5.3.4. INSTALL EXPOSED CONDUIT AND EXTENSIONS FROM CONCEALED CONDUIT SYSTEMS NEATLY, PARALLEL WITH, OR AT RIGHT ANGLES TO WALLS AND STRUCTURAL MEMBERS.
- 5.3.5. RUN CONDUIT FOR OUTLETS ON WATERPROOF WALLS EXPOSED. SET ANCHORS FOR SUPPORTING CONDUIT ON WATERPROOF WALL IN WATERPROOF CEMENT.
- 5.3.6. WHERE PRACTICABLE, INSTALL CONDUIT CONCEALED IN WALLS, FLOORS, CEILINGS AND ABOVE SUSPENDED CEILING AND UNDER GROUND.

6. SERVICE AND DISTRIBUTION

- 6.1. PANEL BOARDS: TO CSA C22.2 No. 29-M1989. WITH CIRCUITS, AMPERAGE, VOLTAGE, PHASES AND BRANCH BREAKERS AS INDICATED ON DRAWINGS.
- 6.2. BREAKERS: BOLT-ON TYPE.

7. CONTROL AND INSTRUMENTATION

- 7.1. INSTRUMENT TAGGING
 - 7.1.1. PROVIDE EACH INSTRUMENT WITH A TAG STAMPED OR ENGRAVED WITH THE INSTRUMENT NUMBER.
 - 7.1.2. TAGS TO BE BRASS, STEEL OR LAMINATED PLASTIC.
 - 7.1.3. AFFIX TAGS TO INSTRUMENTS WITH STRANDED STAINLESS-STEEL WIRE OR ADHESIVE. DO NOT USE ADHESIVE ON CURVED SURFACES.

8. INSTRUMENT WIRING

8.1. WIRE AND CABLE

- 8.1.1. WIRE FOR 120 VAC CONTROL TO BE A MINIMUM AWG 16 TEW STRANDED.
- 8.1.2. ALL CONTROL WIRES SHALL BE COLOUR CODED AS FOLLOWS:
 - 120 VAC HOT - BLACK
 - 120 VAC NEUTRAL - WHITE
 - 24 VDC POSITIVE - RED
 - 24 VDC NEGATIVE - BLUE
 - GROUND - GREEN

8.2. CABLE LABELING

- 8.2.1. LABEL EACH CABLE WHERE IT ENTERS A PANEL OR INSTRUMENT WITH MACHINE-PRINTED HEAT SHRINK TAG.
- 8.2.2. WRITE ON LABELS ARE NOT ACCEPTABLE.

8.3. CONDUCTOR LABELING

- 8.3.1. CONDUCTORS TO BE LABELED AT EACH END BY MACHINE PRINTED HEAT-SHRINK LABELS.
- 8.3.2. WRITE ON LABELS ARE NOT ACCEPTABLE.

8.4. TERMINATION OF CONDUCTORS

- 8.4.1. FOR ALL CONDUCTORS No.18 AWG OR SMALLER, FERRULES SHALL BE USED FOR TERMINATIONS.
- 8.4.2. WHERE SPARE CONDUCTORS ARE PULLED INTO AN INSTRUMENT, JUNCTION BOX OR CONTROL PANEL THE CONDUCTORS SHALL BE LEFT LONG ENOUGH TO REACH ANY TERMINAL WITHIN THE ENCLOSURE. THE SPARE CONDUCTORS WITHIN A JUNCTION BOX OR CONTROL PANEL SHALL BE LABELED WITH CABLE DESTINATION AND TIED BACK.

9. CONTROL PANEL/INSTRUMENTATION

- 9.1. AS PER BILL OF MATERIALS
- 9.2. SHORTING BARS TO BE USED FOR JUMPERING. WIRE JUMPERS ARE NOT ACCEPTABLE.
- 9.3. TERMINAL LABELING:
 - 9.3.1. EACH TERMINAL TO BE LABELED WITH SNAP ON PLASTIC TAGS, PHOENIX CONTACT UC-TM TYPE.
 - 9.3.2. ALL PANEL MOUNTED DEVICES TO BE LABELED BY MEANS OF ENGRAVED LAMACOID LABELS, WHITE LETTERING ON BACK
 - 9.3.3. WRITE ON LABELS ARE NOT ACCEPTABLE.

THE EXISTENCE, LOCATION AND ELEVATION OF ALL UTILITIES AS SHOWN ON ANY PLANS MAY BE BASED ON INFORMATION RECEIVED FROM THE RESPECTIVE AUTHORITIES AND ARE NOT GUARANTEED BY THE ENGINEER. NO RESPONSIBILITY IS IMPLIED OR ASSUMED BY THE ENGINEER AS TO THE LOCATION AND ELEVATION OR ANY OMISSIONS. THE CONTRACTOR OR ANY THIRD-PARTY IS RESPONSIBLE FOR DETERMINING THE EXISTENCE, LOCATION AND ELEVATION OF ALL SUCH UTILITIES AND MUST CONTACT THE VARIOUS UTILITY COMPANIES FOR ON SITE INFORMATION PRIOR TO COMMENCEMENT OF ANY OPERATIONS.

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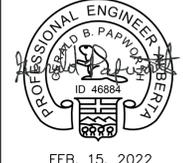
Signature: *Gerald Papworth*

APEGA ID: 46884

Date: FEB. 15, 2022

PERMIT NUMBER: P 3680

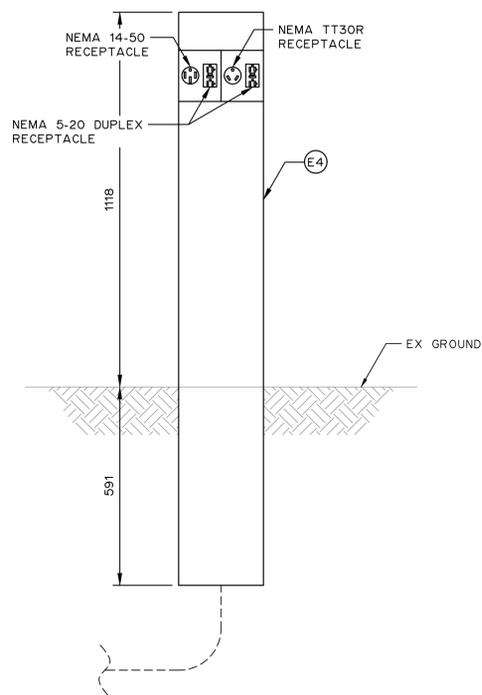
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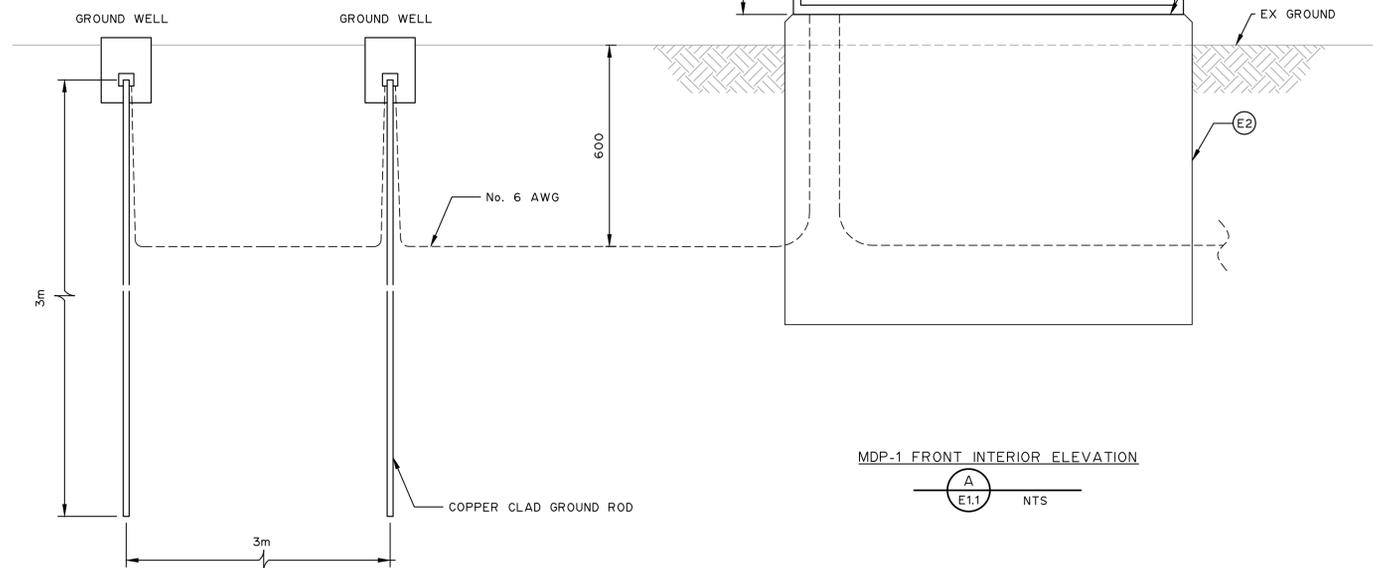

MUNICIPALITY OF DRUMHELLER

**DRUMHELLER DOWNTOWN PLAZA
ELECTRICAL
SPECIFICATIONS**

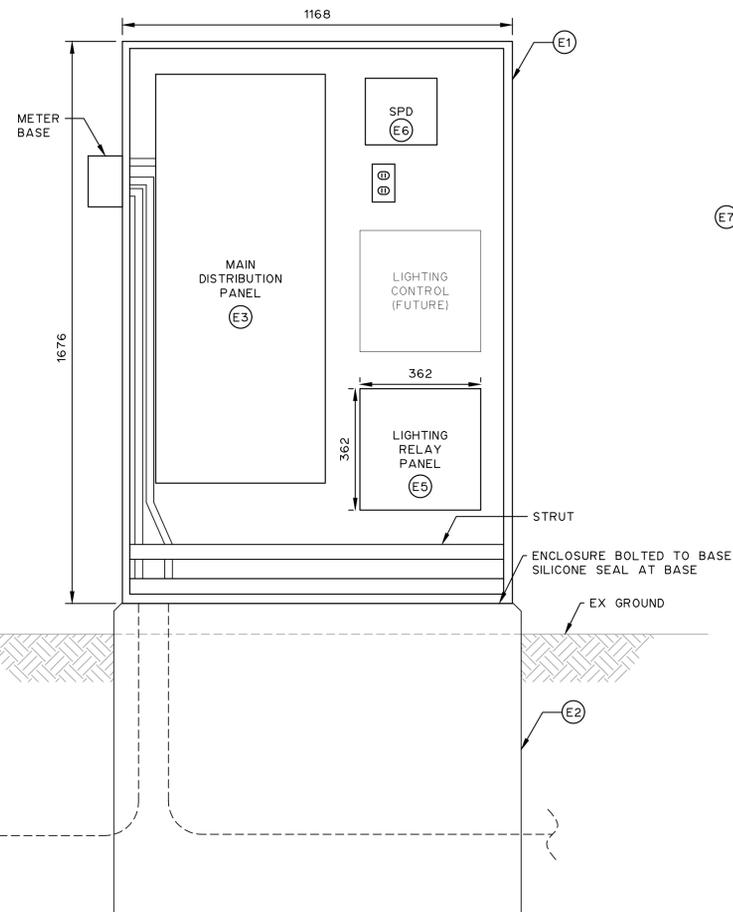
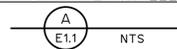
DESIGNED	M.T.F., G.B.P.	JOB	2728-011-00
DRAWN	Y.F.S., M.T.F.	SCALE	NTS
DATE	JANUARY 2022	DRAWING	EO.2



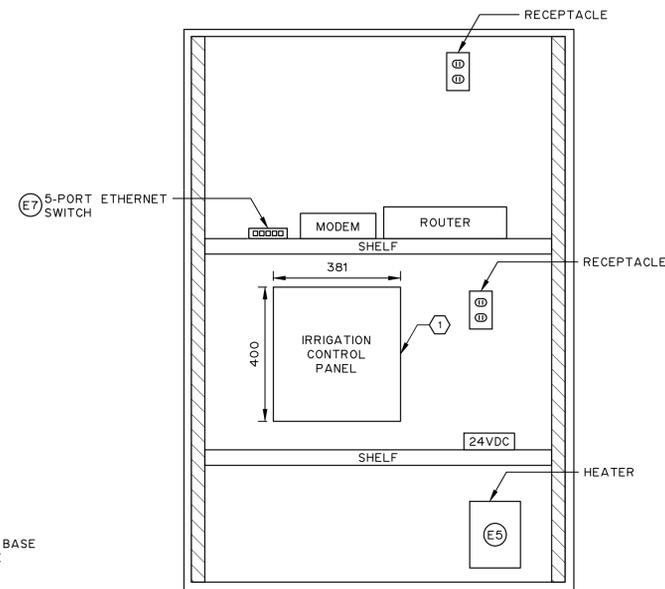
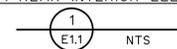
TYPICAL PEDESTAL DETAIL



MDP-1 FRONT INTERIOR ELEVATION



MDP-1 REAR INTERIOR ELEVATION



- NOTES:
1. ALL BOLD ITEMS INDICATE WORK TO BE DONE AND ALL LIGHT ITEMS INDICATE EXISTING CONDITIONS.
 2. ALL DIMENSIONS ARE SHOWN IN MILLIMETRES UNLESS OTHERWISE INDICATED.
 3. MAIN DISTRIBUTION PANEL TO INCLUDE THE FOLLOWING:
 - FOAM BOARD INSULATION ON CEILING, FLOOR, AND INTERIOR WALLS.
 - INTERIOR LIGHT FOR EACH SIDE CONTROLLED BY RESPECTIVE DOOR SWITCH.

KEYNOTES:

1. IRRIGATION CONTROLLER PROVIDED BY OTHERS.

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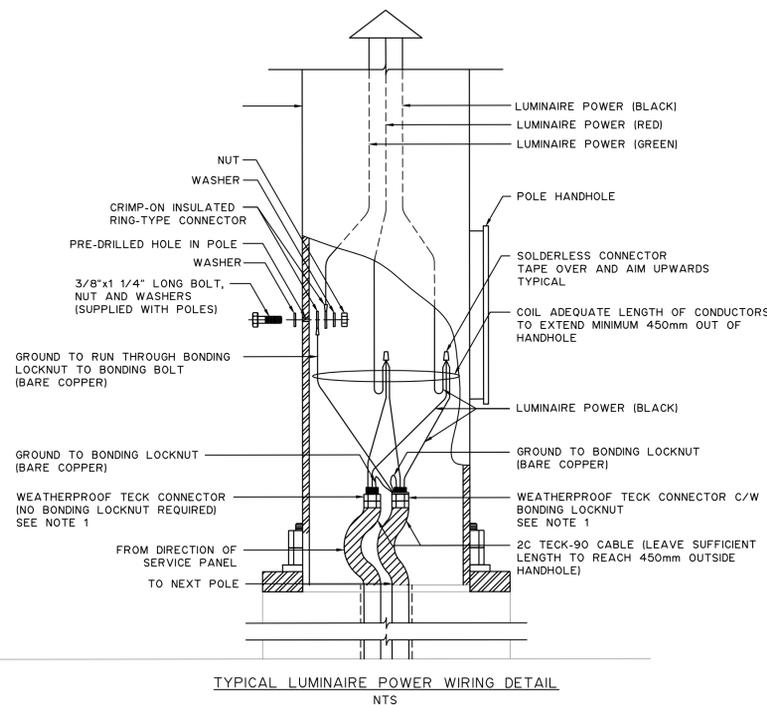
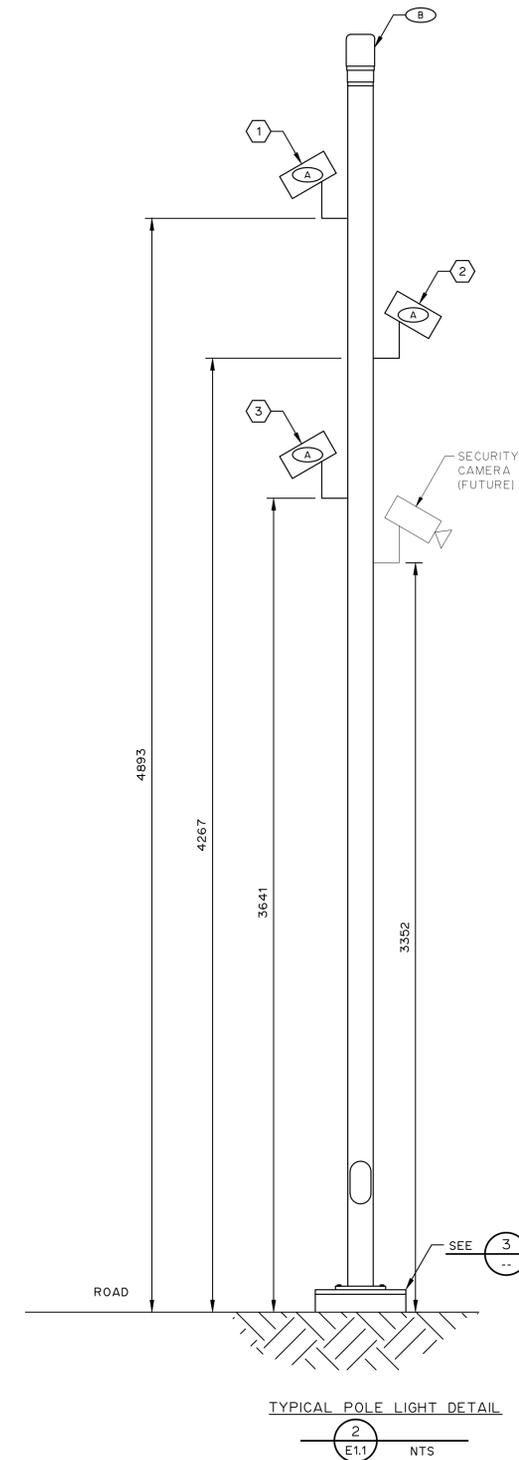
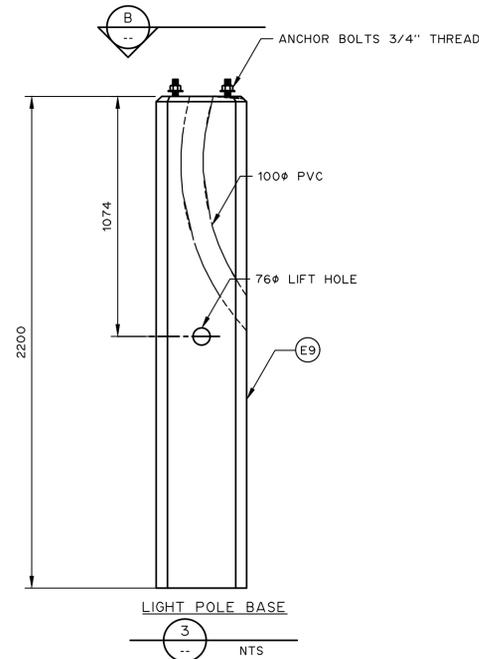
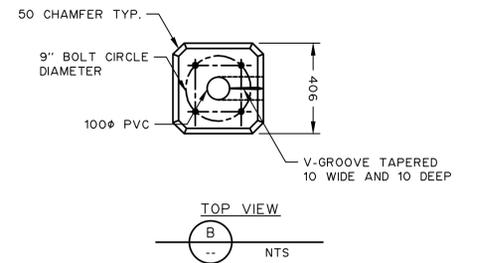
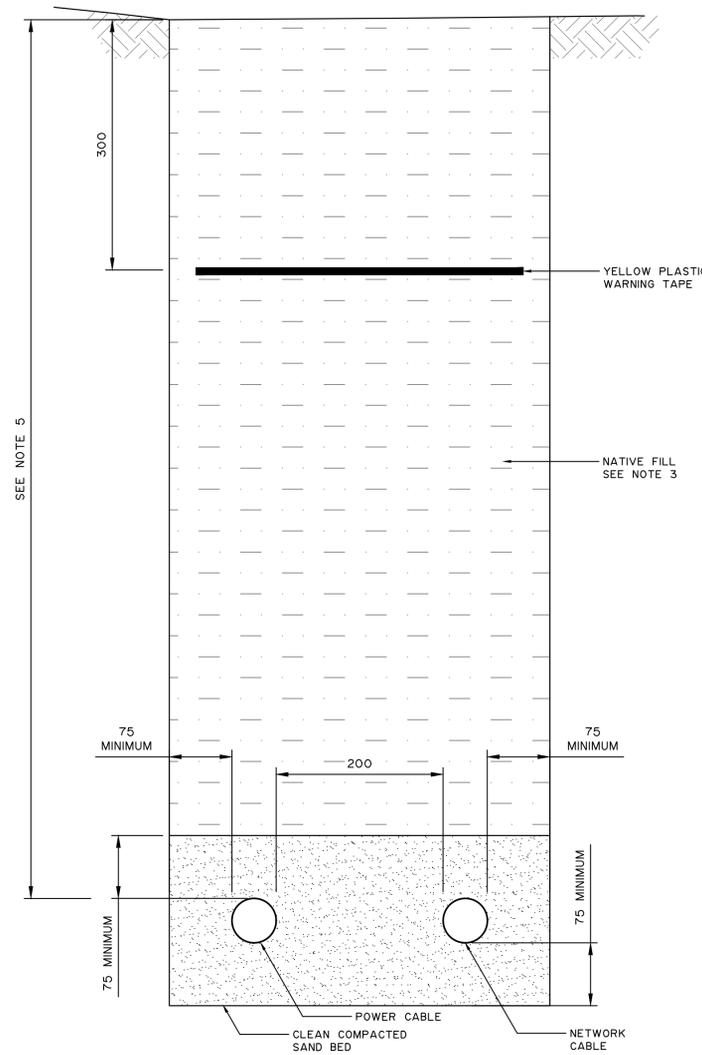
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Signature: *Gerald Papworth*
APEGA ID: 46884
Date: FEB. 15, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)



MUNICIPALITY OF DRUMHELLER

DRUMHELLER DOWNTOWN PLAZA
ELECTRICAL
MAIN DISTRIBUTION PANEL AND
PEDESTAL LAYOUT

DESIGNED	M.T.F., G.B.P.	JOB	2728-011-00
DRAWN	Y.F.S., M.T.F.	SCALE	NTS
DATE	JANUARY 2022	DRAWING	E1.2



- NOTES:
1. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE NOTED.
 2. CONTRACTOR TO CONFIRM ALL CASINGS AND CABLE.
 3. THE NATIVE FILL SHOULD BE COMPACTED TO 95% STANDARD PROCTOR DENSITY.
 4. BURIED CONDUIT SHALL NOT CROSS EACH OTHER.
 5. MINIMUM DEPTH 1000. DEPTH IS TO FINAL GRADE.
 6. FOR MULTIPLE CABLES OF EACH TYPE, SEPARATE CABLES BY TWO DIAMETERS OF THE LARGER CABLE.

- KEYNOTES:
1. FIXTURE TO BE MOUNTED AT 16' WITH AN ANGULAR POSITION OF 0 DEGREES. SEE PRODUCT DATA SHEET FOR MORE DETAILS.
 2. FIXTURE TO BE MOUNTED AT 14' WITH AN ANGULAR POSITION OF 57.5 DEGREES. SEE PRODUCT DATA SHEET FOR MORE DETAILS.
 3. FIXTURE TO BE MOUNTED AT 12' WITH AN ANGULAR POSITION OF 292.5 DEGREES. SEE PRODUCT DATA SHEET FOR MORE DETAILS.
 4. SECURITY CAMERA ONLY TO BE INSTALLED ON TWO LIGHT POLES.

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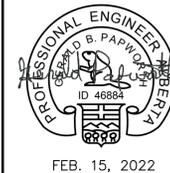
Signature *Gerald Papworth*

APEGA ID 46884

Date FEB. 15, 2022

PERMIT NUMBER: P 3680

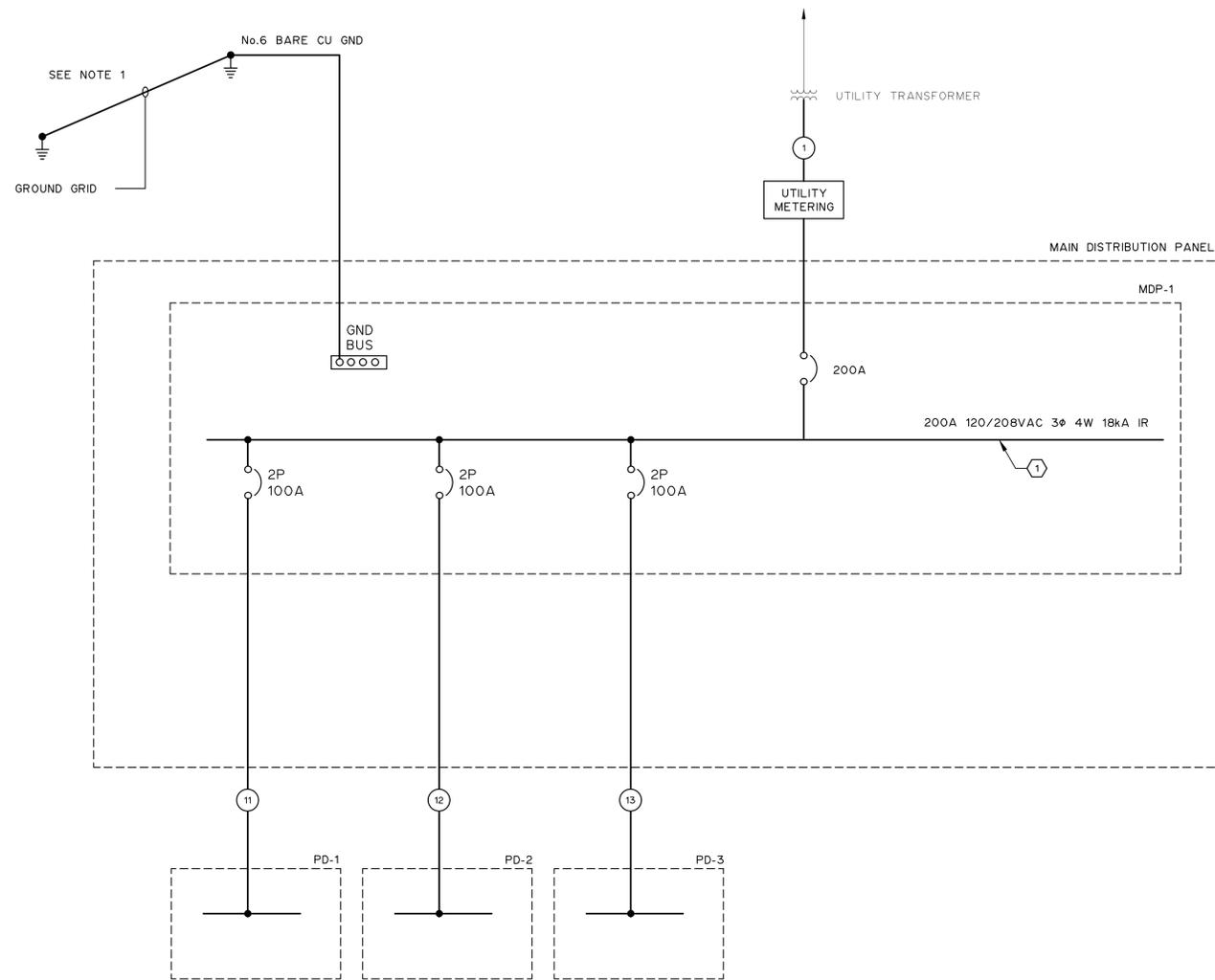
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MUNICIPALITY OF DRUMHELLER

DRUMHELLER DOWNTOWN PLAZA
ELECTRICAL
ELECTRICAL DETAILS

DESIGNED	M.T.F., G.B.P.	JOB	2728-011-00
DRAWN	Y.F.S., M.T.F.	SCALE	NTS
DATE	JANUARY 2022	DRAWING	E1.3



SINGLE LINE DIAGRAM

		PANEL: MDP-1							
		LOCATION: DRUMHELLER PLAZA							
		120/208V 3PH 4W 200A							
DESCRIPTION	LOAD (KW)	TRIP AMPS	BRK. NO.	PHASE	BRK. NO.	TRIP AMPS	LOAD (KW)	DESCRIPTION	
STAGE (50A)	8.3	50	1	A	2	100	16.6	PD-1	
			3	B	4	100	16.6		
50A RECEPTACLE LOCAL	8.3	50	5	C	6	100	16.6	PD-2	
			7	A	8	100	16.6		
30A RECEPTACLE LOCAL	2.9	30	9	B	10	100	16.6	PD-3	
20A RECEPTACLE LOCAL	1.9	20	11	C	12	100	16.6		
STAGE NORTH (20A)	1.9	20	13	A	14	20	1.9	STAGE SOUTH (20A)	
STAGE NORTH (20A)	1.9	20	15	B	16	20	1.9	STAGE SOUTH (20A)	
STAGE NORTH (20A)	1.9	20	17	C	18	20	1.9	STAGE SOUTH (20A)	
IRRIGATION CONTROL PANEL	1.9	20	19	A	20	20	1.9	LIGHT POLE RECEPTACLE NORTH	
LIGHTING CONTROL PANEL	1.9	20	21	B	22	20	1.9	LIGHT POLE RECEPTACLE SOUTH	
LIGHTS	1.9	20	23	C	24	20	1.9	MDP-1 INTERIOR LIGHTS	
MDP-1 INTERIOR RECEPTACLE (POWER)	1.4	15	25	A	26	15	1.4	MDP-1 INTERIOR RECEPTACLE (CONTROL)	
HEATER	0.4	15	27	B	28	15		SPARE	
SPARE		15	29	C	30	15		SPARE	
			31	A	32				
			33	B	34				
			35	C	36				
			37	A	38				
			39	B	40				
			41	C	42				

MDP-1 PANEL SCHEDULE

		PANEL: PD-1							
		LOCATION:							
		120/208V 1PH 3W 100A							
DESCRIPTION	LOAD (W)	TRIP AMPS	BRK. NO.	PHASE	BRK. NO.	TRIP AMPS	LOAD (W)	DESCRIPTION	
50A RECEPTACLE		50	1	A	5	30		20A RECEPTACLE	
			2	B	6	20		SPARE	
30A RECEPTACLE		30	3	A	7			SPARE	
20A RECEPTACLE		20	4	B	8			SPARE	

		PANEL: PD-2							
		LOCATION:							
		120/208V 1PH 3W 100A							
DESCRIPTION	LOAD (W)	TRIP AMPS	BRK. NO.	PHASE	BRK. NO.	TRIP AMPS	LOAD (W)	DESCRIPTION	
50A RECEPTACLE		50	1	C	5	30		20A RECEPTACLE	
			2	A	6	20		SPARE	
30A RECEPTACLE		30	3	C	7			SPARE	
20A RECEPTACLE		20	4	A	8			SPARE	

		PANEL: PD-3							
		LOCATION:							
		120/208V 1PH 3W 100A							
DESCRIPTION	LOAD (W)	TRIP AMPS	BRK. NO.	PHASE	BRK. NO.	TRIP AMPS	LOAD (W)	DESCRIPTION	
50A RECEPTACLE		50	1	B	5	30		20A RECEPTACLE	
			2	C	6	20		SPARE	
30A RECEPTACLE		30	3	B	7			SPARE	
20A RECEPTACLE		20	4	C	8			SPARE	

NOTES:

- NEW GROUND GRID AS FOLLOWS:
 - THERE MUST BE TWO MANUFACTURED ROD ELECTRODES C/W GROUND WELL AND CLAMP.
 - EACH ROD SHALL BE MINIMUM 19mm DIAMETER AND 3m LENGTH.
 - THE RODS MUST BE SPACED 3m APART.
 - THE RODS MUST BE BONDED TOGETHER BY BARE No.6 GROUNDING CONDUCTOR.
 - GROUND WELL TO BE ACE MANUFACTURING MODEL AGW.

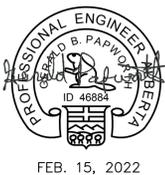
KEYNOTES:

- LOADS SMALLER THAN 100A NOT SHOWN ON SINGLE LINE. SEE MDP-1 PANEL SCHEDULE FOR ALL LOADS.

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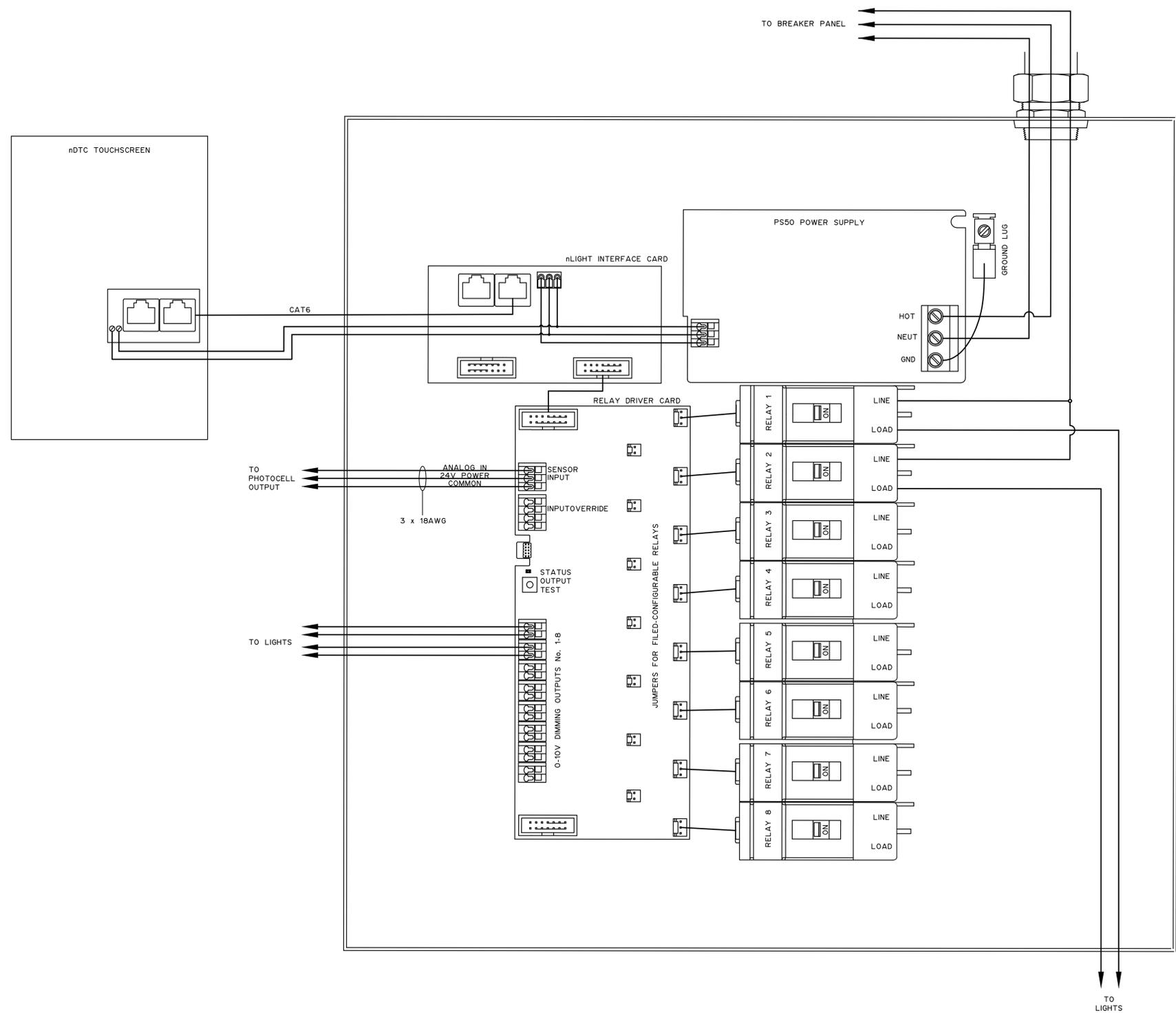
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The Association of Professional Engineers and Geoscientists of Alberta (APEGA)



MUNICIPALITY OF DRUMHELLER

DRUMHELLER DOWNTOWN PLAZA
ELECTRICAL
SINGLE LINE DIAGRAM

DESIGNED	M.T.F., G.B.P.	JOB	2728-011-00
DRAWN	Y.F.S., M.T.F.	SCALE	NTS
DATE	JANUARY 2022	DRAWING	E2.1



NOTES:
 1. PHOTOCELL TO BE MOUNTED ON THE SIDE OF MDP-1 AND SHALL BE CONNECTED TO THE INPUT OF THE RELAY DRIVER CARD. ENSURE MOUNTING LOCATION OF PHOTOCELL IS ABSENT OF ARTIFICIAL LIGHT.

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 APEGA ID 46884
 Date FEB. 15, 2022
 PERMIT NUMBER: P 3680
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PROFESSIONAL ENGINEER
 GERALD B. PAPERWORTH
 ID 46884
 FEB. 15, 2022



MUNICIPALITY OF DRUMHELLER

DRUMHELLER DOWNTOWN PLAZA
 ELECTRICAL
 LIGHTING CONTROLS

DESIGNED	M.T.F., G.B.P.	JOB	2728-011-00
DRAWN	Y.F.S., M.T.F.	SCALE	NTS
DATE	JANUARY 2022	DRAWING	E2.3

LUMINAIRE SCHEDULE											
TAG	DESCRIPTION	MANUFACTURER/MODEL (OR APPROVED EQUIVALENT)	MOUNTING HEIGHT	LAMP	LENS	FIXTURE LUMEN OUTPUT	COLOUR TEMPERATURE	MOUNTING	VOLT	LIFESPAN	REMARKS
A	POLE MOUNTED FIXTURE	LUMINIS SC655L1L15R55120VGRK3HLPCST	12',14',16'	LED	HEXCELL LOUVER	1599	3000K	POLE MOUNT	120	60,000 HRS	3 LIGHTS MOUNTED AT DIFFERENT HEIGHTS ON EACH POLE
B	LIGHT POLE 18'	LUMINIS PAA518-1 GR1 CGF									18' POLE

CABLE SCHEDULE										
REF	CABLE TAG	FROM	TO	CONDUCTOR DETAILS			CONDUIT/CABLE	VOLTAGE	LENGTH (METERS)	NOTES
		EQUIP TAG	EQUIP TAG	NO. OF COND	SIZE AWG	TYPE				
1	MDP-1	UTILITY	MDP-1	4	250	ACWU90		208VAC	TBD	UTILITY
11	PD-1	MDP-1	PD-1	3	1/0	ACWU90		208VAC	TBD	PEDESTAL 1
12	PD-2	MDP-1	PD-2	3	1/0	ACWU90		208VAC	TBD	PEDESTAL 2
13	PD-3	MDP-1	PD-3	3	1/0	ACWU90		208VAC	TBD	PEDESTAL 3
14	STG-N2	MDP-1	STG-N	3	8	TECK90		208VAC	TBD	STAGE NORTH 50A RECEPTACLE
15	STG-N1	MDP-1	STG-N	6	10	TECK90		120VAC	TBD	STAGE NORTH 20A RECEPTACLES
16	STG-S1	MDP-1	STG-S	6	10	TECK90		120VAC	TBD	STAGE NORTH 20A RECEPTACLES
17	SHD	MDP-1	SHD	4	12	TECK90		120VAC	TBD	SHED POWER
21	LP-1P	MDP-1	LP-1	4	12	TECK90		120VAC	TBD	LIGHT POLE 1 LIGHTS/RECEPTACLE
22	LP-2P	LP-1	LP-2	4	12	TECK90		120VAC	TBD	LIGHT POLE 2 LIGHTS/RECEPTACLE
23	LP-3P	LP-2	LP-3	4	12	TECK90		120VAC	TBD	LIGHT POLE 3 LIGHTS/RECEPTACLE
24	LP-4P	MDP-1	LP-4	4	12	TECK90		120VAC	TBD	LIGHT POLE 4 LIGHTS/RECEPTACLE
25	LP-5P	LP-4	LP-5	4	12	TECK90		120VAC	TBD	LIGHT POLE 5 LIGHTS/RECEPTACLE
26	LP-6P	LP-5	LP-6	4	12	TECK90		120VAC	TBD	LIGHT POLE 6 LIGHTS/RECEPTACLE
31	LP-1C	MDP-1	LP-1	1PR	18	SHLD	C31	10VDC	TBD	LIGHT POLE 1 LIGHT CONTROL
32	LP-2C	LP-1	LP-2	1PR	18	SHLD	C32	10VDC	TBD	LIGHT POLE 2 LIGHT CONTROL
33	LP-3C	LP-2	LP-3	1PR	18	SHLD	C33	10VDC	TBD	LIGHT POLE 3 LIGHT CONTROL
34	LP-4C	MDP-1	LP-4	1PR	18	SHLD	C34	10VDC	TBD	LIGHT POLE 4 LIGHT CONTROL
35	LP-5C	LP-4	LP-5	1PR	18	SHLD	C35	10VDC	TBD	LIGHT POLE 5 LIGHT CONTROL
36	LP-6C	LP-5	LP-6	1PR	18	SHLD	C36	10VDC	TBD	LIGHT POLE 6 LIGHT CONTROL

CONDUIT SCHEDULE										
REF	CONDUIT TAG	FROM	TO	CONDUIT DETAILS			VOLTAGE	LENGTH (METERS)	NOTES	
		EQUIP TAG	EQUIP TAG	QTY	SIZE	TYPE				
31	C31	MDP-1	LP-1	1	21	HDPE	24VDC	TBD	CONTROL/NETWORK	
32	C32	LP-1	LP-2	1	21	HDPE	24VDC	TBD	CONTROL/NETWORK	
33	C33	LP-2	LP-3	1	21	HDPE	24VDC	TBD	CONTROL/NETWORK	
34	C34	MDP-1	LP-4	1	21	HDPE	24VDC	TBD	CONTROL/NETWORK	
35	C35	LP-4	LP-5	1	21	HDPE	24VDC	TBD	CONTROL/NETWORK	
36	C36	LP-5	LP-6	1	21	HDPE	24VDC	TBD	CONTROL/NETWORK	
41	C41	ISP	MDP-1	1	35	HDPE	24VDC	TBD	INTERNET PROVIDER	
42	C42	MDP-1	STG-N	1	21	HDPE	24VDC	TBD	NETWORK STAGE	
51	C51	MDP-1	VLV-N	1	35	HDPE	24VDC	TBD	IRRIGATION VALVE BOX NORTH	
52	C52	MDP-1	VLV-S	1	35	HDPE	24VDC	TBD	IRRIGATION VALVE BOX SOUTH	

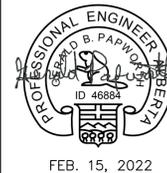
EQUIPMENT SCHEDULE					
ITEM	QUANTITY	DESCRIPTION	MAKE	MODEL	NOTES
E1	1	KIOSK	VALID	DSKA664628-220155	INCLUDE INSULATION AND LIGHTING
E2	1	KIOSK PRECAST CONCRETE BASE	WESTCON	W2-05	
E3	1	DISTRIBUTION PANEL 42 CIRCUIT	EATON	PRL1g	
E4	3	PEDESTAL C/W 50A, 30A, 2X20A	VALID	CPB-PM-MB-HB	
E5	1	LIGHTING RELAY PANEL	ACUITY BRANDS nLIGHT	8SPR	
E6	1	SURGE PROTECTION DEVICE	SURGE PURE	M2-1208-4	
E7	1	ETHERNET SWITCH 5 PORT			
E8	1	HEATER 400W	HAMMOND	FLHTF400A115	
E9	6	LIGHT POLE BASE	WESTCON	W4-07	9" BOLT CIRCLE DIAMETER

- NOTES:
- THE CONDUIT AND CABLE SCHEDULE IS INTENDED TO SHOW THE MAJORITY OF THE POWER AND INSTRUMENTATION CABLE RUNS. INSTALL AND CONNECT ALL CABLES AND CONDUIT TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM.
 - SEE ELECTRICAL PANEL AND MECHANICAL EQUIPMENT SCHEDULES FOR ADDITIONAL WIRING REQUIREMENTS.
 - LIKE VOLTAGE WIRING CAN BE COMBINED IN COMMON CONDUIT PROVIDING MINIMUM 25% SPARE IN ACCOUNTED FOR IN ADD IN TO CEC CONDUIT FILL REQUIREMENTS. SEPARATE CONDUITS ARE REQUIRED FOR 120VAC, 24VDC, ANALOG SIGNALS, COMMUNICATION.
 - ALL IN CONCRETE SLAB RIGID ALUMINUM (ALUM) CONDUIT TO HAVE OUTSIDE OF CONDUIT COVERED WITH CORROSION PROTECTIVE COATING BITUMASTIC, ASPHALT BASED PAINT OR PVC COATING.
 - IN CONCRETE SLAB CONDUITS TO BE RPVC OR RIGID ALUMINUM.
 - IN CEILING CONDUITS TO BE EMT.
 - SURFACE MOUNT CONDUITS TO BE RPVC AND ARE ONLY PERMITTED FOR VERTICAL RUNS INTO CEILING SPACE AND HORIZONTAL RUNS LESS THAN 600. INSTALL ALL CONDUITS IN WALLS, CEILINGS AND FLOORS UNLESS OTHERWISE INDICATED.
 - ALL CABLING SIZE BASED ON 75° TERMINATION TEMPERATURE.
 - PROVIDE AND INSTALL APPROPRIATELY SIZED GROUND CABLE FOR ALL CABLE RUNS.
 - ALL CABLES ARE TO BE COPPER UNLESS OTHERWISE NOTED.
 - GROUND WIRE NOT SHOWN.

THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED (i.e. 1:1000 etc) ARE BASED ON 24"x36" FORMAT DRAWINGS

1 22-02-15 ISSUED FOR TENDER
 ISSUE YY-MM-DD REVISION

PERMIT TO PRACTICE
 MPE ENGINEERING LTD.
 Signature: *Gerald Papworth*
 APEGA ID: 46884
 Date: FEB. 15, 2022
 PERMIT NUMBER: P 3680
 The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

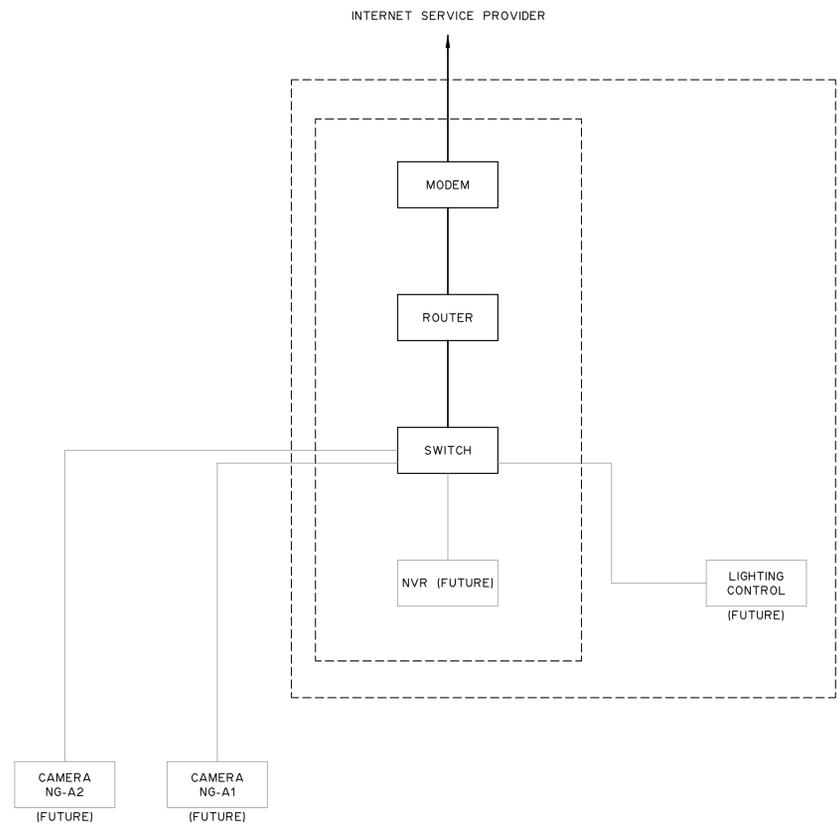


MUNICIPALITY OF DRUMHELLER

DRUMHELLER DOWNTOWN PLAZA
 ELECTRICAL
 SCHEDULES

DESIGNED M.T.F., G.B.P. JOB 2728-011-00
 DRAWN Y.F.S., M.T.F. SCALE NTS
 DATE JANUARY 2022 DRAWING E2.4

- NOTES:
1. ALL LINES CAT6 UNLESS OTHERWISE NOTED.
 2. ALL CABLES EXTERIOR TO BUILDINGS/ENCLOSURES TO BE ARMoured AND SUITABLE FOR DIRECT BURIAL.



THIS DRAWING MAY HAVE BEEN MODIFIED FROM ITS ORIGINAL SIZE. ALL SCALE NOTATIONS INDICATED (i.e. 1:1000 etc) ARE BASED ON 24"x36" FORMAT DRAWINGS

1	22-02-15	ISSUED FOR TENDER
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ISSUE YY-MM-DD REVISION

PERMIT TO PRACTICE
MPE ENGINEERING LTD.
Signature *Gerald Papworth*
APEGA ID 46884
Date FEB. 15, 2022
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)



MUNICIPALITY OF DRUMHELLER

DRUMHELLER DOWNTOWN PLAZA
ELECTRICAL
NETWORK ARCHITECTURE

DESIGNED	M.T.F., G.B.P.	JOB	2728-011-00
DRAWN	Y.F.S., M.T.F.	SCALE	NTS
DATE	JANUARY 2022	DRAWING	E3.1

PROJECT
**DRUMHELLER
 DOWNTOWN PLAZA**
 FOR
 MUNICIPALITY OF DRUMHELLER

MUNICIPAL ADDRESS
 XXX XXX

LEGAL DESCRIPTION
 PLAN XXXX, BLOCK X, LOT X

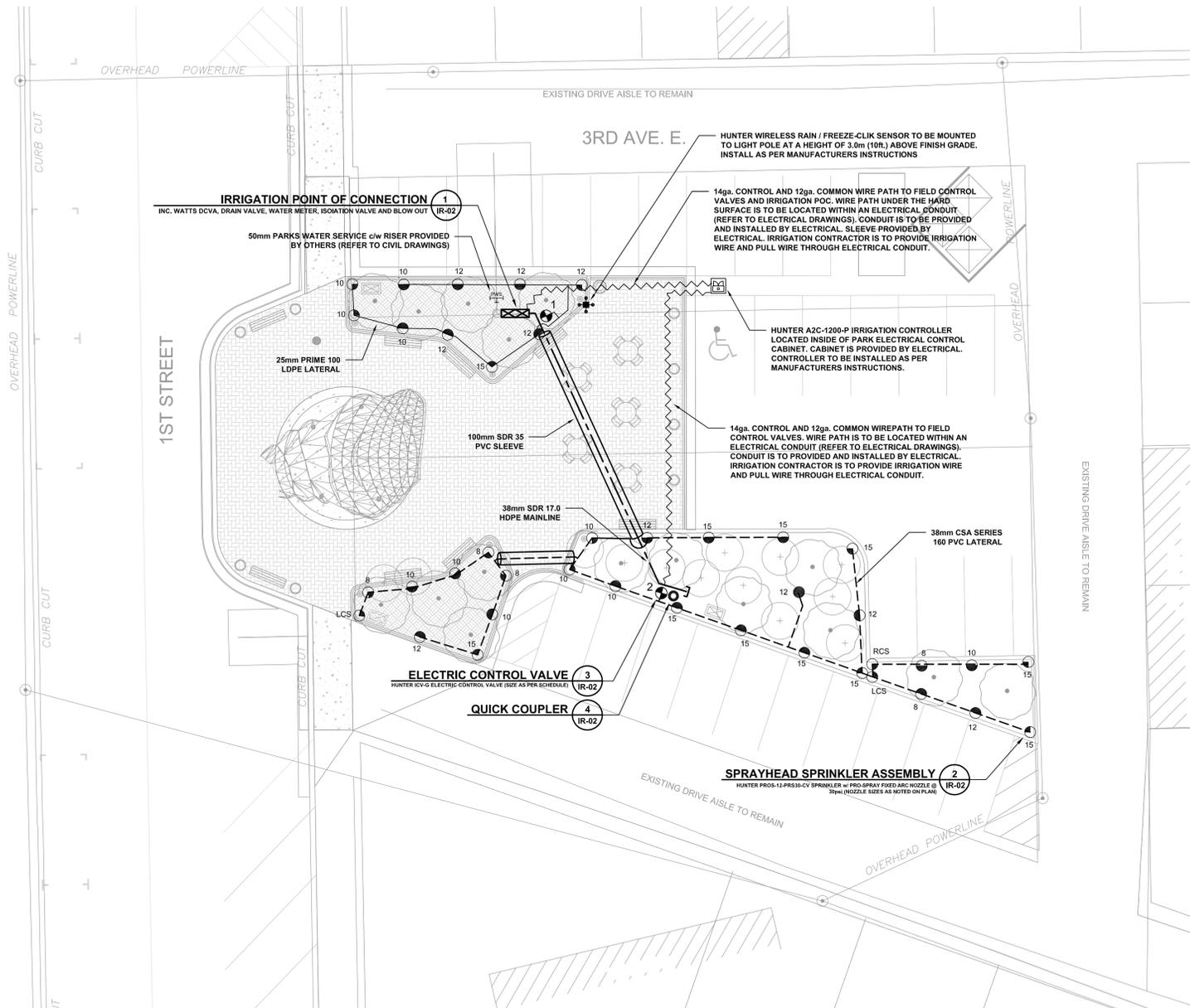
CONSULTANTS



SEALS



KEYMAP



1 IRRIGATION PLAN
 IR-01 1:150

IRRIGATION LEGEND:

- 14GA CONTROL AND 12GA COMMON WIRE PATH
- 25mm PRIME 100 LDPE LATERAL
- 38mm CSA SERIES 160 PVC LATERAL
- 38mm SDR 17.0 HDPE MAINLINE
- 100mm SDR 35 PVC SLEEVE. TWO TIMES PIPE DIAMETER OR SUM OF PIPES PASSING THROUGH THE SLEEVE. INSTALL 50mm Ø WIRE CONDUIT ADJACENT TO MAINLINE SLEEVES TYP. @ 300mm DEPTH BELOW FINISH GRADE, SIDEWALKS AND PATHWAYS. SLEEVE @ 600mm DEPTH BELOW DRIVEWAYS AND ROADWAYS. EXTEND SLEEVING MINIMUM 300mm BEYOND EDGE OF ADJACENT HARD SURFACE.
- HUNTER WIRELESS RAIN/FREEZE-CLK SENSOR
- 50mm PARKS WATER SERVICE c/w RISER PROVIDED BY OTHERS
- HUNTER A2C-1200-P IRRIGATION CONTROLLER LOCATED INSIDE OF PARK ELECTRICAL CONTROL CABINET. CABINET IS PROVIDED BY ELECTRICAL. CONTROLLER TO BE INSTALLED AS PER MANUFACTURERS INSTRUCTIONS.
- 2 SPRAYHEAD SPRINKLER ASSEMBLY**
 HUNTER PROS-12-PR330-CV SPRINKLER w/ PRO-SPRAY FIXED ARC NOZZLE @ 30psi (NOZZLE SIZES AS NOTED ON PLAN)
- 1 IRRIGATION SYSTEM POINT OF CONNECTION**
 INC. WATTS DCVA, DRAIN VALVE, WATER METER, ISOLATION VALVE AND BLOW OUT
- 3 ELECTRIC CONTROL VALVE**
 HUNTER ICV-G ELECTRIC CONTROL VALVE (SIZE AS PER SCHEDULE)
- 4 QUICK COUPLER**
 IR-02

IRRIGATION NOTES:

1. THE CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES AND SERVICES PRIOR TO CONSTRUCTION.
2. ALL IRRIGATION PRODUCTS, MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS AND IRRIGATION SPECIFICATIONS PROVIDED IN THE CONTRACT.
3. THE CONTRACTOR SHALL VERIFY STATIC PRESSURE AT THE POINT OF CONNECTIONS AND NOTIFY CONSULTANT OF READINGS. MINIMUM PRESSURE REQUIRED IS 50 PSI. IF THE PRESSURE IS LOWER THAN 50 PSI THEN A BOOSTER PUMP MAY BE REQUIRED.
4. CONTRACTOR SHALL MONITOR AND ADJUST THE WATER SCHEDULE SEASONALLY AND AS NEEDED TO ENSURE THAT PLANT WATER REQUIREMENTS ARE MET & NOT EXCEEDED.
5. IRRIGATION PLANS ARE SCHEMATIC ONLY. ALL TREES, LIGHT STANDARDS, HARD SURFACES OR AMENITIES. TAKE PRECEDENCE OVER LOCATION OF IRRIGATION COMPONENTS
6. SUBSTITUTION REQUESTS SHALL BE MADE IN WRITING TO THE CONTRACT ADMINISTRATOR MINIMUM 7 BUSINESS DAYS PRIOR TO CLOSE OF TENDER AND SHALL BE ACCOMPANIED BY PRODUCT LITERATURE, SHOP DRAWINGS, AND PERFORMANCE CHARTS.
7. WIRE SPLICES SHALL BE MADE w/ 3M DBY/R CONNECTORS & LOCATED AT ELECTRIC CONTROL ZONE VALVES.
8. CONTRACTOR SHALL ENSURE ALL UTILITY INSTALLATIONS HAVE BEEN COMPLETED PRIOR TO PLANTING.
9. ALL SPRINKLER RADII AND ARC'S ARE TO BE ADJUSTED TO AVOID OVER-SPRAY ONTO HARD SURFACES.
10. STATIC WATER PRESSURE: 65-75 PSI

IRRIGATION WATERING SCHEDULE

ZONE	IRRIGATION TYPE	VALVE SIZE	LATERAL SIZE	DESIGN FLOW (gpm)	DESIGN PRESSURE (psi)	PRECIPITATION RATE ("/hr)	PLANT TYPE	SOIL TYPE	WATERING (days/week)	PEAK RUN TIME (mins/day) PER WATERING DAY	# CYCLES PER DAY	CYCLE TIMES (mins)
1	SPRAY	25mm	25mm	9.1	30	1.60	TREE'S & SHRUBS	CLAY / LOAM	5	8	2	4
2	SPRAY	38mm	38mm	29.9	30	1.60	TREE'S & SHRUBS	CLAY / LOAM	5	8	2	4
TOTAL PEAK RUN TIME										16		

BASED ON PEAK BASE SCHEDULE FOR MONTH OF JULY (ET=0.18"/DAY)
 Note: 1) The above schedule is for mature size trees and shrubs and should be adjusted to the growth stage.
 2) The above schedule is for the peak month of July and should be reduced to 73% for May, 84% for June, 82% for August and 56% for September.

Drumheller Downtown Plaza-System Pressure Loss Calculations

Item ID	Flow gpm	Length (ft)	Loss Per/100ft psi	Loss per Item psi
Zone 2				
38mm Series 160 PVC Lateral (use manufacturer's catalog pressure loss chart)				
Hunter Pro-spray	0.97	15	0.02	0.003
Hunter Pro-spray	2.27	12	0.03	0.004
Hunter Pro-spray	2.74	8	0.05	0.004
Hunter Pro-spray	3.24	14	0.16	0.022
Hunter Pro-spray	8.47	2	0.37	0.007
Hunter Pro-spray	12.9	15	0.44	0.056
Hunter Pro-spray	17.4	2	0.52	0.010
Hunter Pro-spray	19.68	12	0.71	0.085
Hunter Pro-spray	21.67	15	1	0.150
Hunter Pro-spray	29.9	2	1.75	0.035
Pressure Loss per Total Lateral Pipe Length				0.387
Pressure Loss per Lateral Pipe Fittings @ 10%				0.039
Total Pressure Loss per Lateral				0.426
Electric Control Valve (use manufacturer's catalog pressure loss chart)				
38mm Hunter ICV	29.9			1.600
Total Pressure Loss per Valve				1.600
Mainline (use manufacturer's catalog pressure loss chart)				
38mm SDR 17.0 HDPE Mainline	29.9	65	3	1.980
Pressure Loss per Total Mainline Pipe Length				1.980
Pressure Loss per Mainline Pipe Fittings @ 10%				0.198
Total Pressure Loss per Mainline				2.178
Water Meter (use manufacturer's catalog pressure loss chart)				
25mm Neptune Mach 10	29.9gpm			3.200
Pressure Loss per flow sensor				3.200
Total Pressure Loss per Meter & Master Valve				3.200
DCVA (use manufacturer's catalog pressure loss chart)				
38mm Zum Model 350	29.9gpm			6.000
Pressure Loss per DCVA				6.000
Total Pressure Loss per DCVA				6.000
Additional Fittings, Valves, etc. Losses (use manufacturer's catalog pressure loss chart)				
Pressure Loss for Additional Fittings Valves, etc. @ 7.5%				1.090
Total Pressure Loss per DCVA				1.090
Total Pressure System Pressure Loss				14.494
Sprinkler Operating Pressure				30.000
Minimum Static Pressure Required to Operate Irrigation System				44.494
Static Pressure Available Pressure				65.000
Available Pressure				20.506

ISSUED FOR: TENDER
 DATE: 2022-02-15
NOT FOR CONSTRUCTION

REVISIONS:
 NO. DESCRIPTION. DATE. BY.
 2 ISSUE FOR TENDER 2022-02-15
 1 ISSUE REVIEW SET 2022-02-08
 DESIGNED BY: DL CHECKED BY: DL

DRAWING TITLE:
IRRIGATION PLAN
IR-01
 DRUMHELLER DOWNTOWN PLAZA
 210201

PROJECT
**DRUMHELLER
 DOWNTOWN PLAZA**
 FOR
 MUNICIPALITY OF DRUMHELLER

MUNICIPAL ADDRESS
 XXX XXX
 LEGAL DESCRIPTION
 PLAN XXXX, BLOCK X, LOT X

CONSULTANTS



SEALS



ISSUED FOR: TENDER
 DATE: 2022-02-15

NOT FOR CONSTRUCTION

REVISIONS:	NO.	DESCRIPTION.	DATE.	BY.

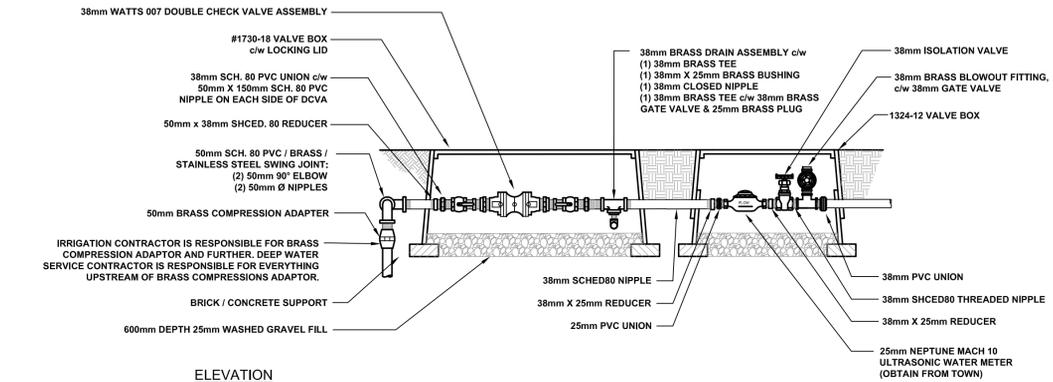
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1	ISSUE REVIEW SET	2022-02-08

DESIGNED BY: DL CHECKED BY: DL

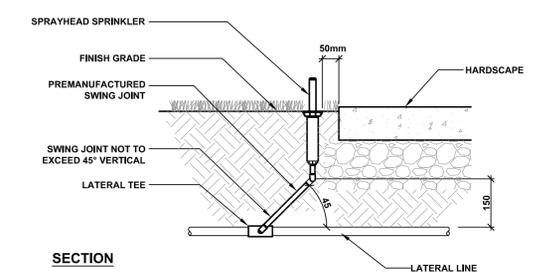
DRAWING TITLE:
IRRIGATION DETAIL PLAN

IR-02

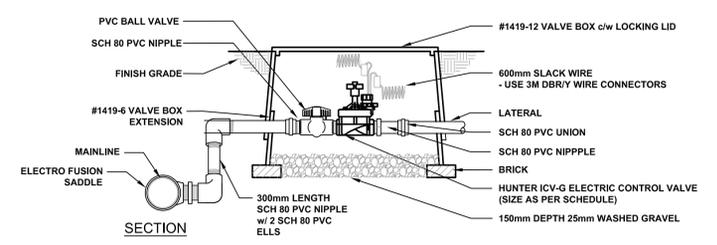
DRUMHELLER DOWNTOWN PLAZA
 210201



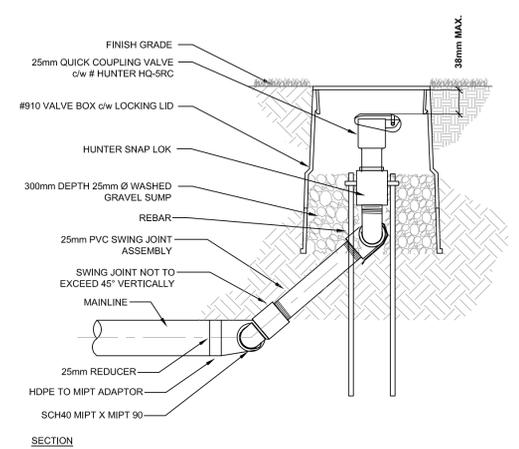
1 IRRIGATION POINT OF CONNECTION
 IR-02 N.T.S.



2 SPRAYHEAD SPRINKLER ASSEMBLY
 IR-02 N.T.S.



3 ELECTRIC CONTROL VALVE
 IR-02 N.T.S.



4 QUICK COUPLER
 IR-02 N.T.S.