# Appendix 3
# Infrastructure Site Assessment Plans and Photos

**Final Report**
August 22, 2014
State Project # 2014-415
NAC # 111-14011

NAC | ARCHITECTURE

Washington State Department of Social & Health Services

# EASTERN STATE HOSPITAL SITE INFRASTRUCTURE MASTER PLAN

## SHEET INDEX


GENERAL

G-1.....COVER

HARD SCAPE (ROADS, SIDEWALKS, AND PARKING LOTS)

HS-1.....WESTLAKE NORTH
HS-2.....EASTLAKE NORTH
HS-3.....WESTLAKE SOUTH
HS-4.....EASTLAKE SOUTH
HS-5.....PINELODGE
HS-6.....SOUTH ENTRANCE
HS-7.....LAKELAND VILLAGE NORTH
HS-8.....LAKELAND VILLAGE SOUTH

SANITARY SEWER SYSTEM (CONVEYANCE PIPES, AND MANHOLES)

SA-1.....WESTLAKE NORTH
SA-2.....EASTLAKE NORTH
SA-3.....WESTLAKE SOUTH
SA-4.....EASTLAKE SOUTH
SA-5.....PINELODGE
SA-6.....NOT USED
SA-7.....LAKELAND VILLAGE NORTH
SA-8.....LAKELAND VILLAGE SOUTH

POTABLE WATER SYSTEM (WELLS, PUMPS, RESERVOIRS AND DISTRIBUTION PIPES)

WA-1.....WESTLAKE NORTH
WA-2.....EASTLAKE NORTH
WA-3.....WESTLAKE SOUTH
WA-4.....EASTLAKE SOUTH
WA-5.....PINELODGE
WA-6.....SOUTH ENTRANCE
WA-7.....LAKELAND VILLAGE NORTH
WA-8.....LAKELAND VILLAGE SOUTH

STORM WATER SYSTEM (PONDS, COLLECTION STRUCTURES AND PIPING)

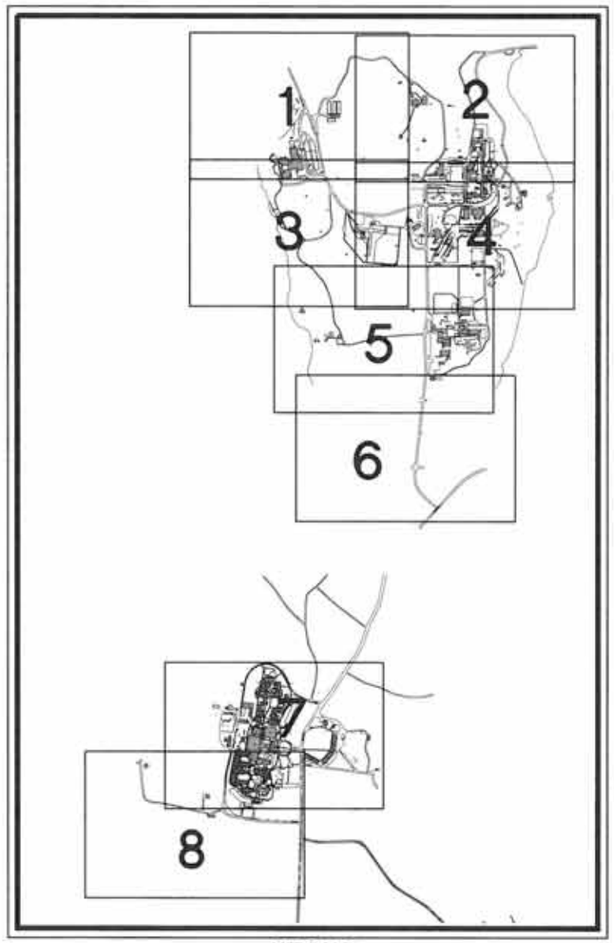
SD-1.....WESTLAKE NORTH
SD-2.....EASTLAKE NORTH
SD-3.....WESTLAKE SOUTH
SD-4.....EASTLAKE SOUTH
SD-5.....PINELODGE
SD-6.....NOT USED
SD-7.....LAKELAND VILLAGE NORTH
SD-8.....LAKELAND VILLAGE SOUTH

IRRIGATION SYSTEM (MAIN LINE PIPES, PUMPS AND RESERVOIRS)

L-1.....WESTLAKE NORTH
L-2.....EASTLAKE NORTH
L-3.....WESTLAKE SOUTH
L-4.....EASTLAKE SOUTH
L-5.....PINELODGE
L-6.....NOT USED
L-7.....LAKELAND VILLAGE NORTH
L-8.....LAKELAND VILLAGE SOUTH

NATURAL GAS SYSTEM (PIPES)

NG-1.....WESTLAKE NORTH
NG-2.....EASTLAKE NORTH
NG-3.....WESTLAKE SOUTH
NG-4.....EASTLAKE SOUTH
NG-5.....PINELODGE
NG-6.....NOT USED
NG-7.....LAKELAND VILLAGE NORTH
NG-8.....LAKELAND VILLAGE SOUTH


KEYMAP

LEGEND

- ANTICIPATED TO BE DEMOLISHED
- RATING 1-NEW CONDITION
- RATING 2-GOOD CONDITION
- RATING 3-FAIR CONDITION
- RATING 4-POOR
- RATING 5-FAILING

REVISIONS

DWN: QHF DATE:
CK'D: MAA DATE:


Taylor Engineering, Inc.
Civil Design and Land Planning
W. 106 Mission Ave.
Spokane, Washington 99201
(509) 328-3371 FAX (509) 328-8224


SCALE: NTS

SHEET G-1

ESH INFRASTRUCTURE MASTER PLAN

COVER

CADD FILE

GRAVEL

GRAVEL

GRAVEL

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

89

R-1
RECOMMEND GRIND AND OVERLAY
SEE PHOTO #2
713 SY ASPHALT
COST=$7,850

R-1
RECOMMEND GRIND AND OVERLAY
SEE PHOTO #1
1,214 SY ASPHALT
COST=$13,354

27

LEGEND

- ANTICIPATED TO BE DEMOLISHED
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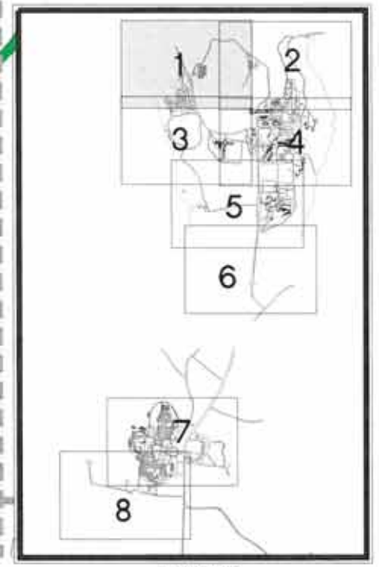


KEYMAP

NORTH

100 50 0 100 200

SCALE 1"=100' 22X34 FEET
1"=200' 11X17

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SCALE: 1"=100'

SHEET HS-1

ESH INFRASTRUCTURE MASTER PLAN

HARD SCAPE

DWN: GHF DATE:
CK'D: MAA DATE:

CADD FILE:

PHOTO #1

PHOTO #2

R-5
RECOMMEND GRAVEL OVERLAY
418 SY DIRT
COST=$3,762

R-1
RECOMMEND GRIND AND OVERLAY
345 SY ASPHALT
COST=$6,555

R-1
RECOMMEND GRIND AND OVERLAY
300 SY ASPHALT
COST=$3,300

R-1
RECOMMEND GRIND AND OVERLAY
195 SY ASPHALT
COST=$2,145

R-1
RECOMMEND GRIND AND OVERLAY
SEE PHOTO #3
9,696 SY ASPHALT
COST=$106,656

R-6
RECOMMEND REMOVAL AND
REPLACEMENT
SEE PHOTO #4
366 SY CONCRETE
COST=$19,398

R-8
RECOMMEND REPLACEMENT
20 SY CONCRETE SIDEWALK
COST=$700

R-1
RECOMMEND GRIND AND OVERLAY
SEE PHOTO #6
1850 SY ASPHALT
COST=$20,350

R-6
RECOMMEND REPLACEMENT
SEE PHOTO #5
253 SY CONCRETE
COST=$13,409

DIRT
GRAVEL
GRAVEL

LEGEND
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KEYMAP

NORTH

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1"=200' 11X17

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SCALE: 1"=100'

SHEET HS-2

ESH INFRASTRUCTURE MASTER PLAN

HARD SCAPE

DWN: CHF
CK'D: MAA
DATE:
DATE:
CADD FILE:

PHOTO #3

PHOTO #4

PHOTO #5

PHOTO #6

R-1
RECOMMEND GRIND AND OVERLAY
1858 SY ASPHALT
COST=$20,438

R-1
RECOMMEND GRIND AND OVERLAY
2611 SY ASPHALT
COST=$28,721

R-2
RECOMMEND REPLACEMENT
SEE PHOTO #7
72 SY ASPHALT
COST=$2,160

R-1
RECOMMEND OVERLAY
SEE PHOTO #8
335 SY ASPHALT
COST=$3,685

R-3
RECOMMEND REFRESHING GRAVEL
SEE PHOTO #9
1552 SY GRAVEL
COST=$4,656

GRAVEL

GRAVEL

R-3
RECOMMEND REFRESHING GRAVEL
SEE PHOTO #12
2308 SY GRAVEL
COST=$6,924

GRAVEL

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

LEGEND

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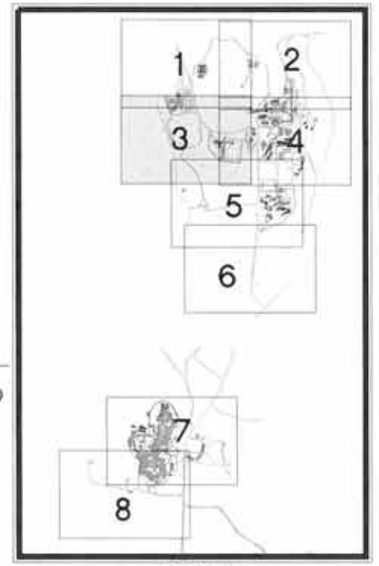


KEYMAP

NORTH

100 50 0 100 200

SCALE 1"=100' 22X34 FEET
1"=200' 11X17

REVISIONS

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CK'D: MAA DATE:

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SCALE: 1"=100'

SHEET HS-3

ESH INFRASTRUCTURE MASTER PLAN

HARD SCAPE

CADD FILE

PHOTO #7

PHOTO #8

PHOTO #9

PHOTO #10

PHOTO #11

PHOTO #12

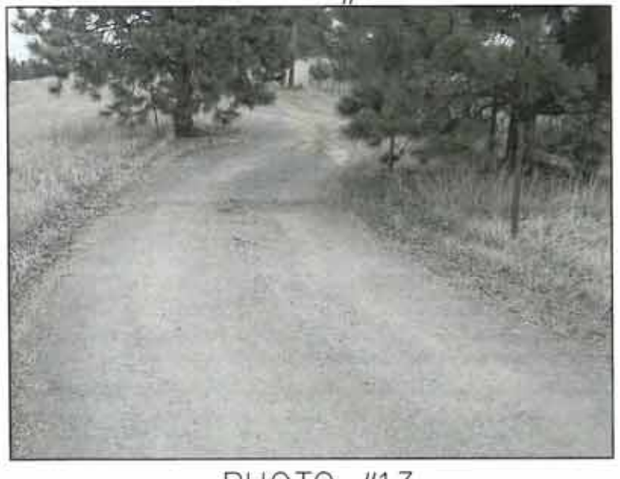
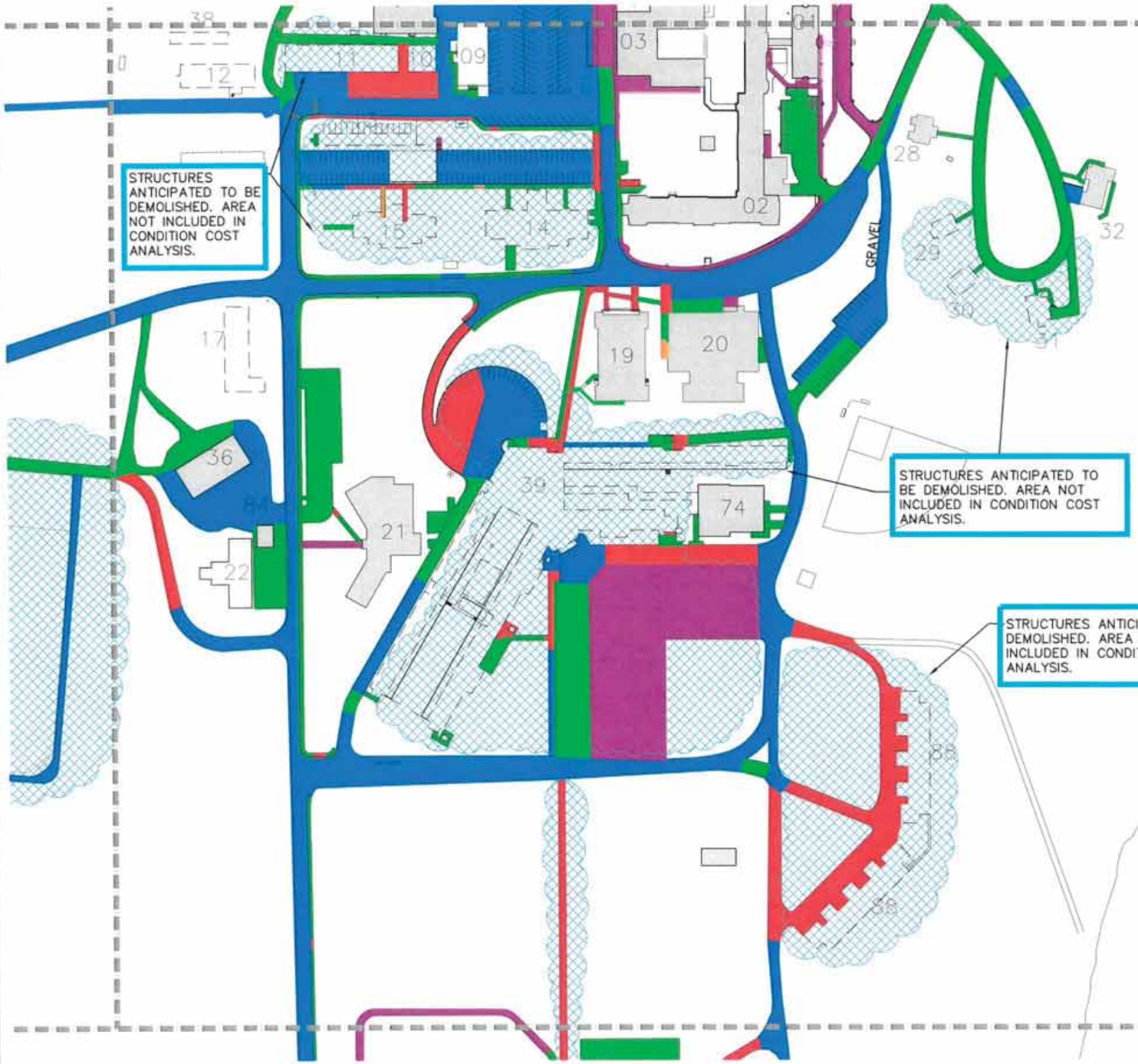


PHOTO #13




| HARD SURFACING DEFICIENCIES | | | | |
|---|---|---|---|---|
| CODE | RECOMMENDATION | AREA | PHOTO # | COST |
| R-1 | GRIND AND OVERLAY | 29,228 SY | #14 | $555,332 |
| R-2 | REPLACEMENT | 2,352 SY | #16 | $70,560 |
| R-3 | REFRESHING GRAVEL | 1,267 SY | | $3,801 |
| R-4 | | | | |
| R-5 | | | | |
| R-6 | | | | |
| R-7 | CRACK SEAL AND GRINDING | 67 SY | | $134.00 |
| R-8 | REPLACEMENT | 753 SY | #15 | $26,355 |

LEGEND

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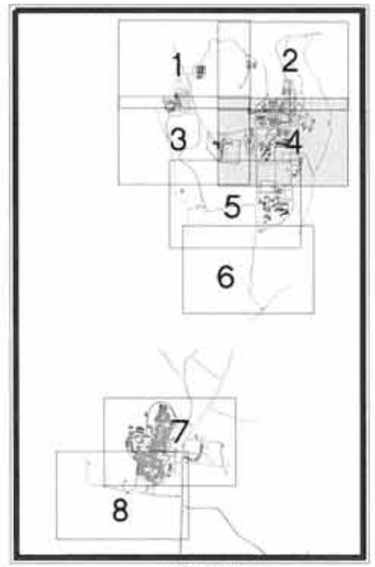


KEYMAP

REVISIONS

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SCALE: 1"=100'

SHEET HS-4

ESH INFRASTRUCTURE MASTER PLAN

HARD SCAPE

CADD FILE:

PHOTO #14

PHOTO #15

PHOTO #16

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

R-2
RECOMMEND REPLACE
1477 SY ASPHALT
COST=$44,310

R-1
RECOMMEND GRIND AND OVERLAY
197 SY ASPHALT
COST=$2,167

R-1
RECOMMEND GRIND AND OVERLAY
269 SY ASPHALT
COST=$2,959

R-7
RECOMMEND CRACK SEAL
84 SY CONCRETE
COST=$168.00

R-4
RECOMMEND REBUILD
SEE PHOTO #19
637 SY GRAVEL
COST=$4,777
(cancelled)

R-1
RECOMMEND GRIND AND OVERLAY
453 SY ASPHALT
COST=$4,983

R-1
RECOMMEND GRIND AND OVERLAY
SEE PHOTO #17
5048 SY ASPHALT
COST=$55,528

R-6
RECOMMEND REPLACE
SEE PHOTO #18
173 SY
COST=$9,169

R-6
RECOMMEND REPLACE
215 SY
COST=$11,395

GRAVEL

GRAVEL

GRAVEL

KEYMAP

LEGEND

- ANTICIPATED TO BE DEMOLISHED
- RATING 1-NEW CONDITION
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- RATING 4-POOR
- RATING 5-FAILING

NORTH

100 50 0 100 200

SCALE 1"=100' 22X34 FEET
1"=200' 11X17

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SCALE: 1"=100'

SHEET
HS-5

ESH INFRASTRUCTURE MASTER PLAN

HARD SCAPE

DWN: GHF
CK'D: MAA
DATE:
DATE:
CADD FILE:

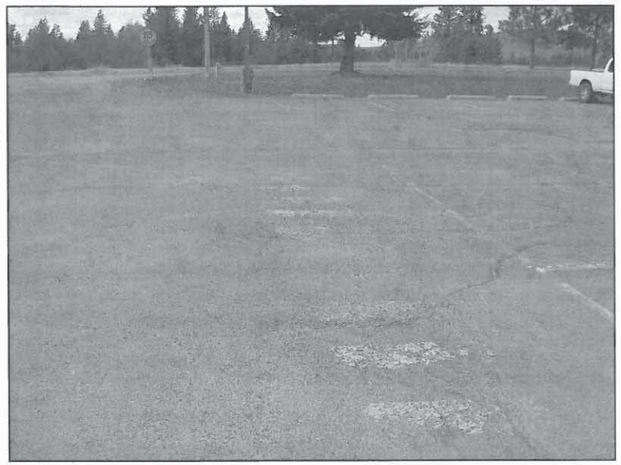

PHOTO #17

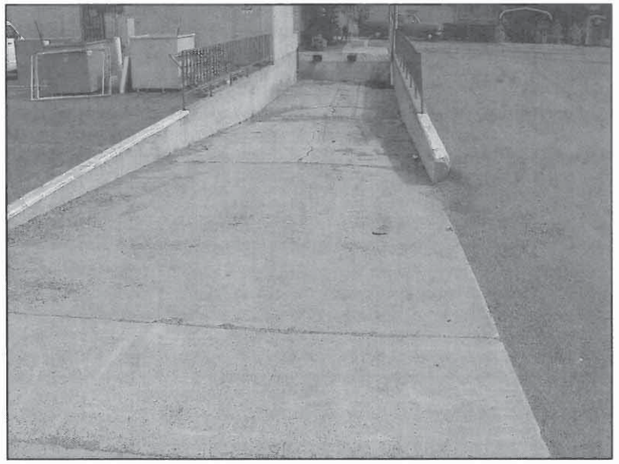

PHOTO #18

PHOTO #19

R-1
RECOMMEND GRIND AND OVERLAY
SEE PHOTO #20
4529 SY ASPHALT
COST=$49,819

LEGEND

- ANTICIPATED TO BE DEMOLISHED
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- RATING 5-FAILING

KEYMAP

NORTH

100 50 0 100 200

SCALE 1"=100' 22X34 FEET
1"=200' 11X17

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(509) 328-3321 FAX (509) 328-8224

SCALE: 1"=100'

SHEET HS-6

ESH INFRASTRUCTURE MASTER PLAN

HARD SCAPE

DWN: SHF DATE:
CK'D: MAA DATE:

CADD FILE:

PHOTO #20

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

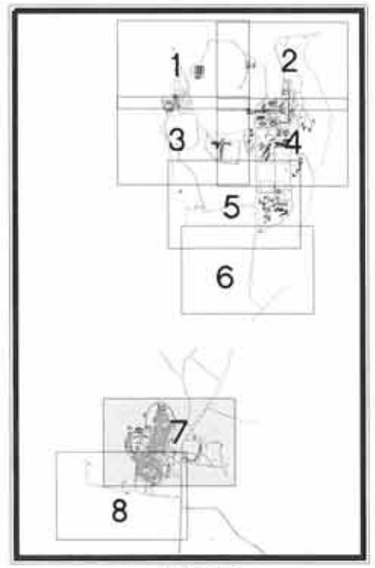
LAKELAND APT. MAY BE DEMOLISHED IF RESTORED
R-1 578 SY=$10,982
R-2 4,206 SY=$126,180
R-8 518 SY=$18,130

GRAVEL

GRAVEL

LEGEND

- ANTICIPATED TO BE DEMOLISHED
- RATING 1-NEW CONDITION
- RATING 2-GOOD CONDITION
- RATING 3-FAIR CONDITION
- RATING 4-POOR
- RATING 5-FAILING




KEYMAP

HARD SURFACING DEFICIENCIES

| CODE | RECOMMENDATION | AREA | PHOTO # | COST |
|---|---|---|---|---|
| R-1 | GRIND AND OVERLAY | 10,076 SY | 24 | $191,444 |
| R-2 | REPLACE | 5,125 SY | 23 | $153,750 |
| R-3 | | | | |
| R-4 | | | | |
| R-5 | | | | |
| R-6 | | | | |
| R-7 | CRACK SEAL AND GRINDING | 760 SY | | $1,520 |
| R-8 | REPLACE | 1308 SY | 21 & 22 | $45,780 |

NORTH

100 50 0 100 200

SCALE 1"=100' 22X34 FEET
1"=200' 11X17

REVISIONS

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SCALE: 1"=100'

SHEET HS-7

ESH INFRASTRUCTURE MASTER PLAN

HARD SCAPE

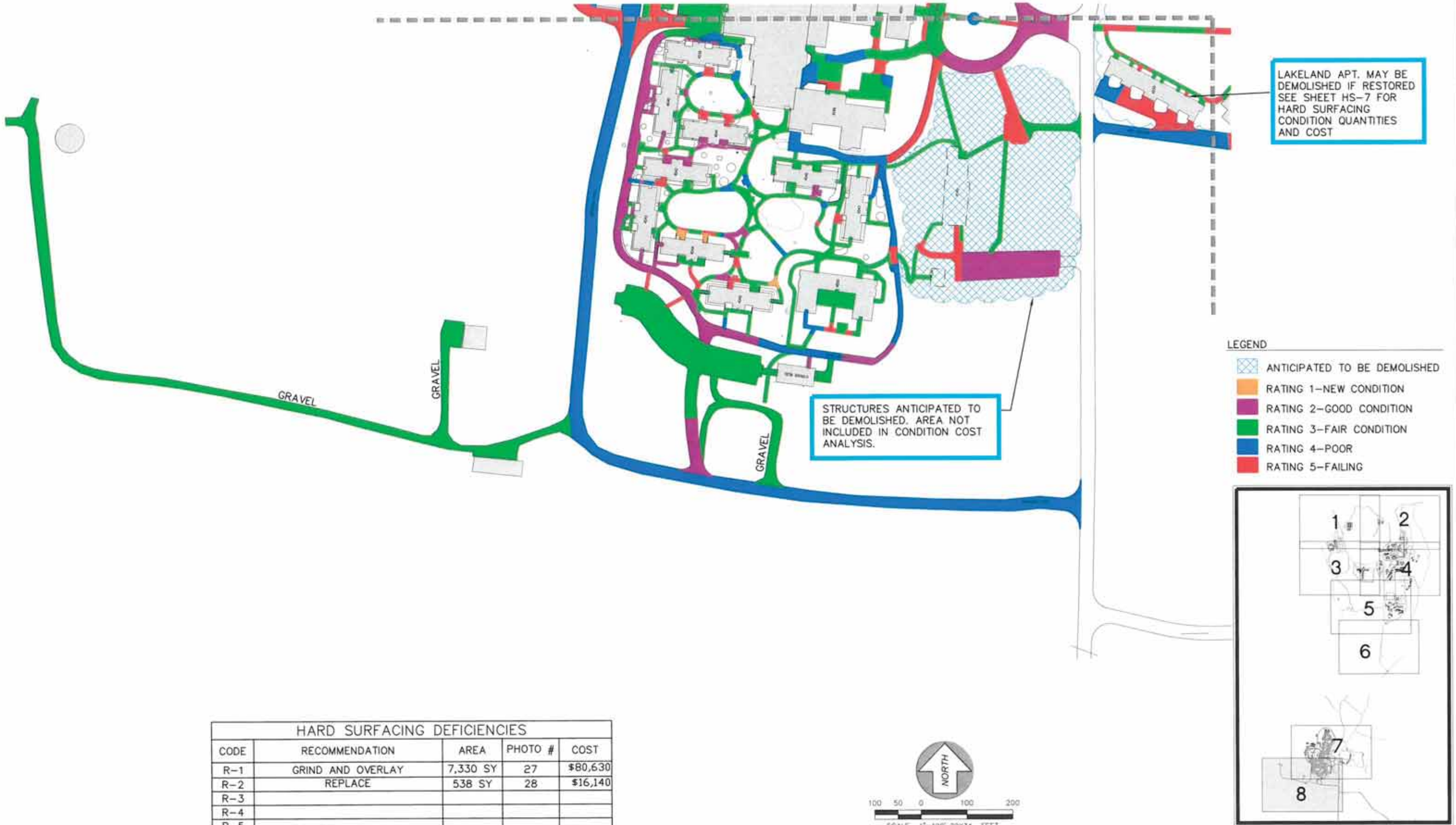
CADD FILE:

PHOTO #21

PHOTO #22

PHOTO #23

PHOTO #24




| HARD SURFACING DEFICIENCIES | | | | |
|---|---|---|---|---|
| CODE | RECOMMENDATION | AREA | PHOTO # | COST |
| R-1 | GRIND AND OVERLAY | 7,330 SY | 27 | $80,630 |
| R-2 | REPLACE | 538 SY | 28 | $16,140 |
| R-3 | | | | |
| R-4 | | | | |
| R-5 | | | | |
| R-6 | REPLACE | 289 SY | 25 | $15,317 |
| R-7 | CRACK SEAL AND GRINDING | 689 SY | | $1,378 |
| R-8 | REPLACE | 1,011 SY | 26 | $35,385 |

REVISIONS

DWN: DHF
CK'D: MAA
DATE:
DATE:

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Civil Design and Land Planning
W. 100 Mission Ave.
Spokane, Washington 99201
(509) 328-5371 FAX (509) 328-8224

SCALE: 1"=100'

SHEET HS-8

ESH INFRASTRUCTURE MASTER PLAN

HARD SCAPE

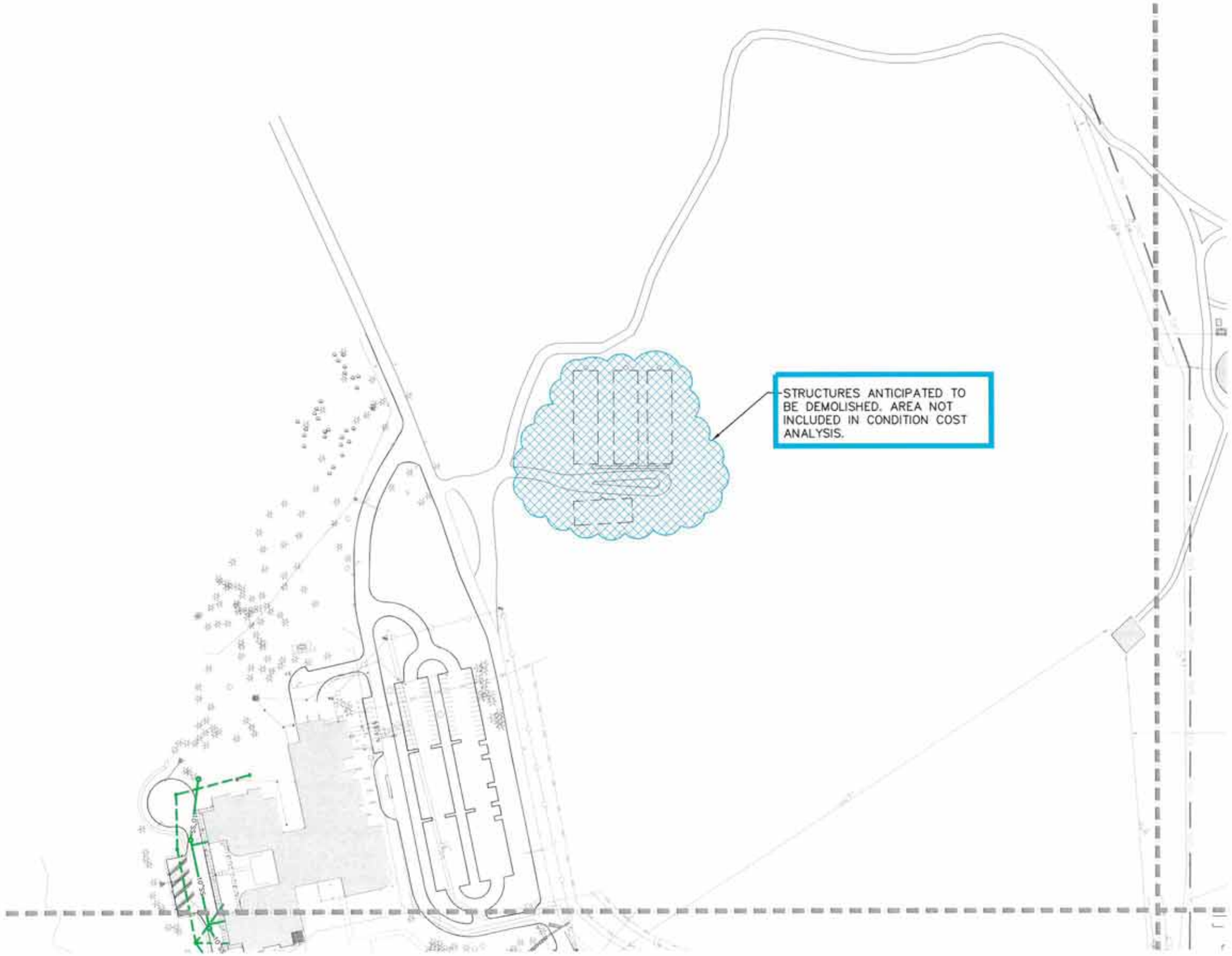
CADD FILE:

PHOTO #25

PHOTO #26

PHOTO #27

PHOTO #28




LEGEND

- ANTICIPATED TO BE DEMOLISHED
- RATING 1–NEW CONDITION
- RATING 2–GOOD CONDITION
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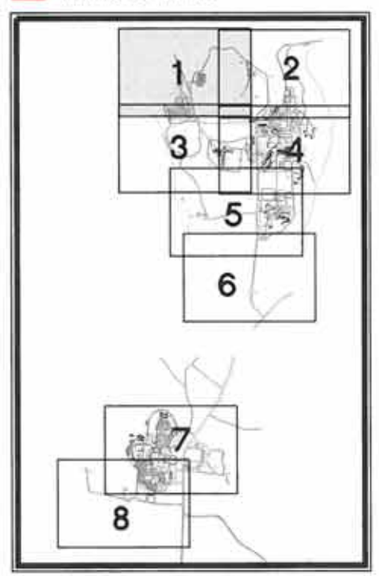
- RATING 4–POOR
- RATING 5–FAILING




KEYMAP

NORTH

100 50 0 100 200

SCALE 1"=100' 22X34 FEET
1"=200' 11X17

REVISIONS

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SCALE: 1"=100'

SHEET SA-1

ESH INFRASTRUCTURE MASTER PLAN

SANITARY SEWER

CADD FILE:

LEGEND

- ANTICIPATED TO BE DEMOLISHED
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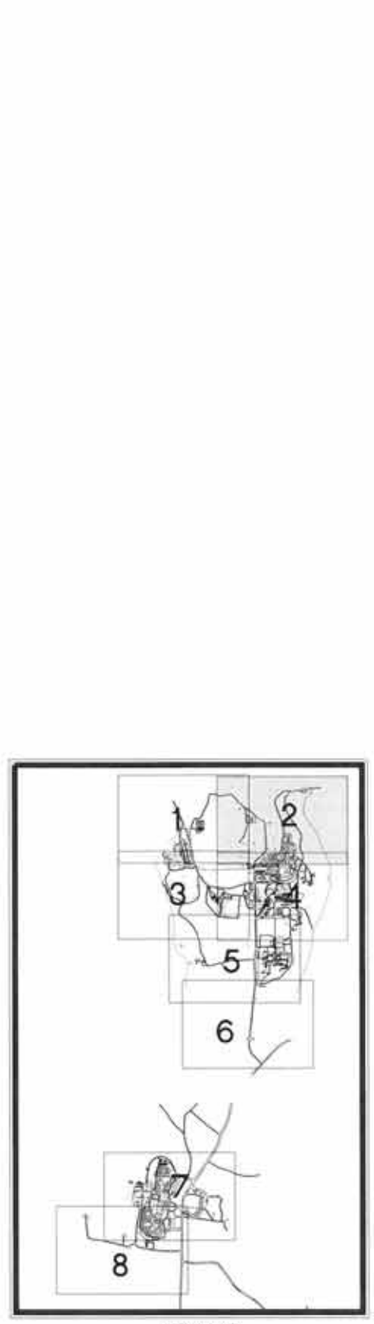


KEYMAP

NORTH

100 50 0 100 200

SCALE: 1"=100' 22X34 FEET
1"=200' 11X17

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SCALE: 1"=100'

SHEET SA-2

ESH INFRASTRUCTURE MASTER PLAN

SANITARY SEWER

DWN: GHF DATE:
CK'D: MAA DATE:

CAD FILE:

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

LEGEND

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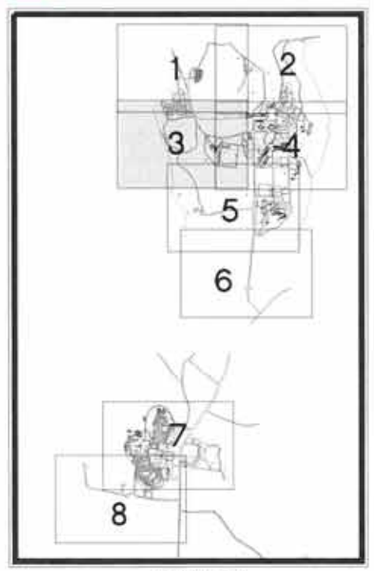


KEYMAP

NORTH

100 50 0 100 200

SCALE 1"=100' 22X34 FEET
1"=200' 11X17

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SCALE: 1"=100'

SHEET SA-3

ESH INFRASTRUCTURE MASTER PLAN

SANITARY SEWER

DWN: CHF DATE:
CK'D: MAA DATE:

CADD FILE:

S-3
REPLACE 6" GRAVITY SEWER LINE AND 4" BUILDING SERVICES (POOR CONDITION)
504 LF OF 4" AND 6" PIPE
COST=$15,000

S-2
REPLACE 4" GRAVITY SEWER LINE (FAILING CONDITION)
164 LF OF 4" PIPE
COST=$5,000

S-1
REPLACE OLD 2" PRESSURE SEWER LINE
690 LF OF 2" PIPE
COST=$10,000

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

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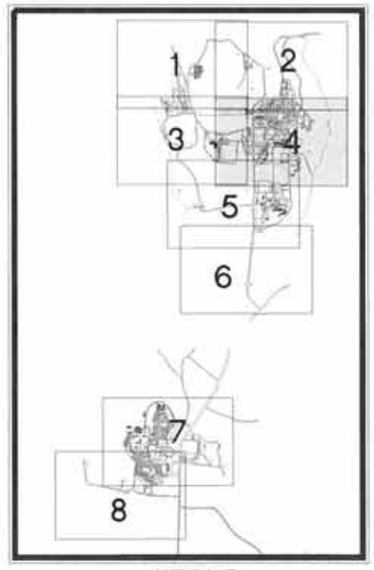
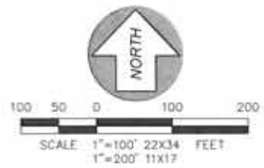



KEYMAP

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SCALE: 1"=100'

SHEET SA-4

DWN: GHF
CK'D: MAA
DATE:
DATE:

ESH INFRASTRUCTURE MASTER PLAN

SANITARY SEWER

EXISTING FILE:

S-11
BURY ~200 LF 4" PVC PRESSURE RETURN LINE FROM SECONDARY OVERFLOW BASIN.
COST=$500.00

S-8
SAND-BLAST AND RE-COAT EXPOSED STEEL TANKS AND IRON PIPING ON PRIMARY AND SECONDARY OVERFLOW BASINS.
COST=$5,000

S-9
REPAIR AND REPLACE MISSING BITUMINOUS SHINGLE ROOFING TILES ON GAZEBO ROOF
COST=$400.00

S-10
REPAIR 60 LF FENCE AROUND WASTEWATER CONVEYANCE AND OVERFLOW FACILITY AND RESET FENCE POSTS AT 2 ACCESS GATES.
COST=$2,000

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

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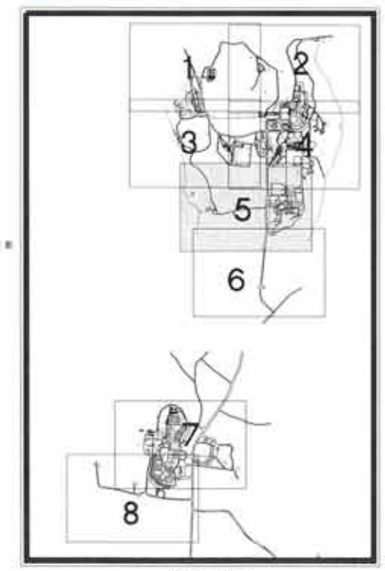
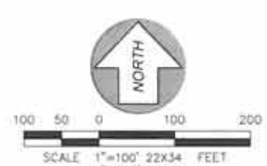



KEYMAP




REVISIONS

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CK'D: MAA DATE:

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SCALE: 1"=100'

SHEET SA-5

ESH INFRASTRUCTURE MASTER PLAN

SANITARY SEWER

JOB NO.

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

S-5
INSTALL NEW 6" GRAVITY SEWER LINE (POOR CONDITION) AROUND AUTO SHOP
150 LF OF 6" PIPE
COST=$4,500

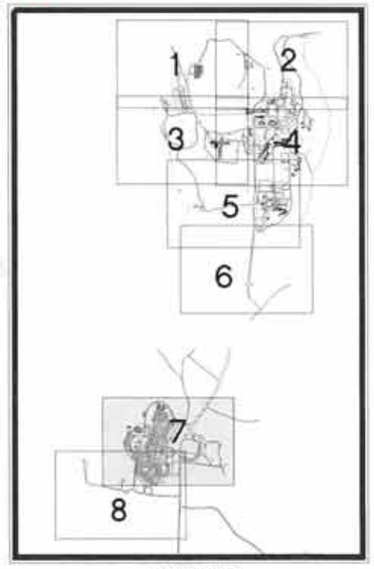
S-4
INSTALL NEW 4" GRAVITY SEWER LINE (FAILING CONDITION)
XXX LF OF 4" PIPE
COST=$XXXX

LEGEND

- ANTICIPATED TO BE DEMOLISHED
- RATING 1-NEW CONDITION
- RATING 2-GOOD CONDITION
- RATING 3-FAIR CONDITION
- RATING 4-POOR
- RATING 5-FAILING

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.




KEYMAP

NORTH

100 50 0 100 200

SCALE 1"=100' 22X34 FEET
1"=200' 11X17

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SCALE: 1"=100'

SHEET SA-7

ESH INFRASTRUCTURE MASTER PLAN

SANITARY SEWER

DWN: CHF DATE:
CK'D: MAA DATE:

CAD# FILE:

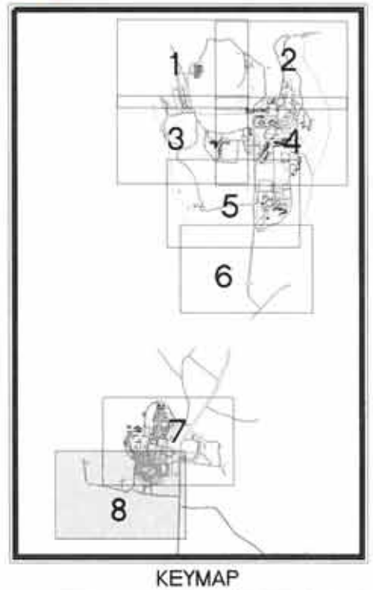
S-5
INSTALL NEW 6" GRAVITY SEWER LINE (FAILING CONDITION)
125 LF OF 6" PIPE (12' DEEP)
COST=$10,000

S-6
INSTALL 3 NEW SEGMENTS OF 6" GRAVITY SEWER LINE (FAILING CONDITION)
170 LF OF 6" PIPE
COST=$10,000

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

LEGEND

- ANTICIPATED TO BE DEMOLISHED
- RATING 1-NEW CONDITION
- RATING 2-GOOD CONDITION
- RATING 3-FAIR CONDITION
- RATING 4-POOR
- RATING 5-FAILING

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SCALE: 1"=100'

SHEET SA-8

ESH INFRASTRUCTURE MASTER PLAN

SANITARY SEWER

EXIST. FEB.

W-1
PUMP HOUSE – WELL #1
RECOMMENDATION–REPLACE PUMP HOUSE STRUCTURE
SEE PHOTO–#5 AND #6
COST=$741,000

12"CAST IRON PIPE
RATING–4
RECOMMENDATION– REPLACE
COST–

W-2
PUMP HOUSE – BOOSTER PUMP
RECOMMENDATION–ABANDON
SEE PHOTO–#1–#4
COST=$167,000
OR
W-3
PUMP HOUSE – BOOSTER PUMP
RECOMMENDATION–REPLACE PUMP
COST=$243,000

VALVE ON 16" PIPE
NORMALLY OPERATING POSITION IS CLOSED

S. LADD RD
S. ESPANOLA RD
S. RITCHY RD
W HALLETT RD
W CHASE RD
W ESPANOLA RD
BNSF RR
S. BROOKS RD

14" PVC PIPE
RATING–1

W-4
PUMP HOUSE – WELL #2
RECOMMENDATION–REPLACE PUMP HOUSE STRUCTURE
SEE PHOTO–#7–#9
COST=$712,000

W-5
PUMP HOUSE – WELL #2
RECOMMENDATION–REPLACE WELL
COST=$161,000

TO EASTERN STATE HOSPITAL RESERVOIR

TO PUMP HOUSE–BOOSTER PUMP
SEE WATER PUMP STATION AND BOOSTER PUMP DETAIL TO THE LEFT

WATER PUMP STATIONS AND BOOSTER PUMP
NOT TO SCALE

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

27

LEGEND
- ANTICIPATED TO BE DEMOLISHED
- RATING 1–NEW CONDITION
- RATING 2–GOOD CONDITION
- RATING 3–FAIR CONDITION
- RATING 4–POOR
- RATING 5–FAILING

KEYMAP

NORTH

100 50 0 100 200
SCALE: 1"=100' 22X34 FEET
1"=200' 11X17

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SCALE: 1"=100'

SHEET
WA-1

ESH INFRASTRUCTURE MASTER PLAN

POTABLE WATER

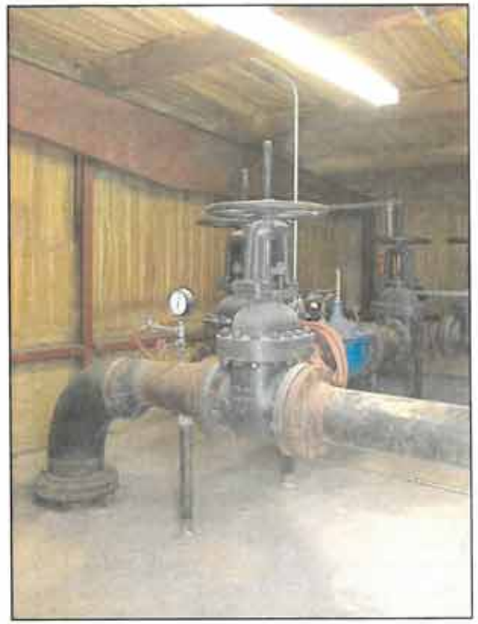


PHOTO #1

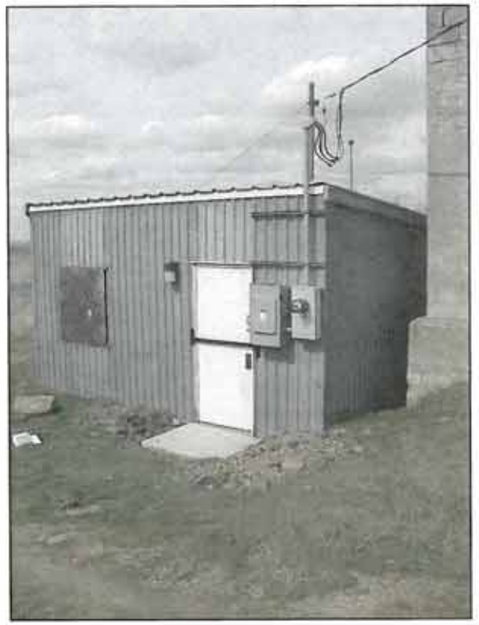


PHOTO #2

PHOTO #3

PHOTO #4

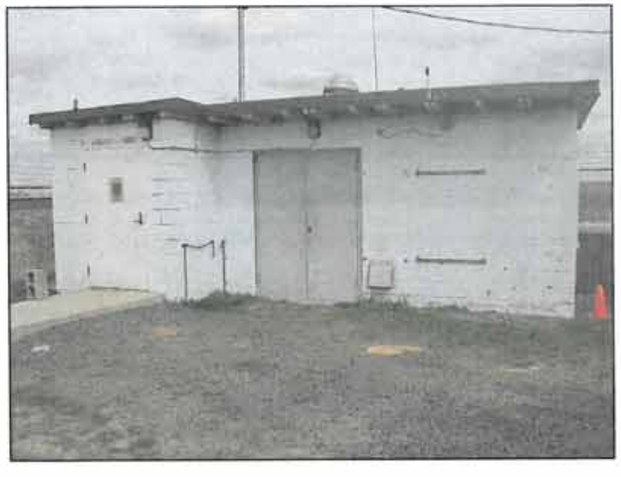


PHOTO #5

PHOTO #6

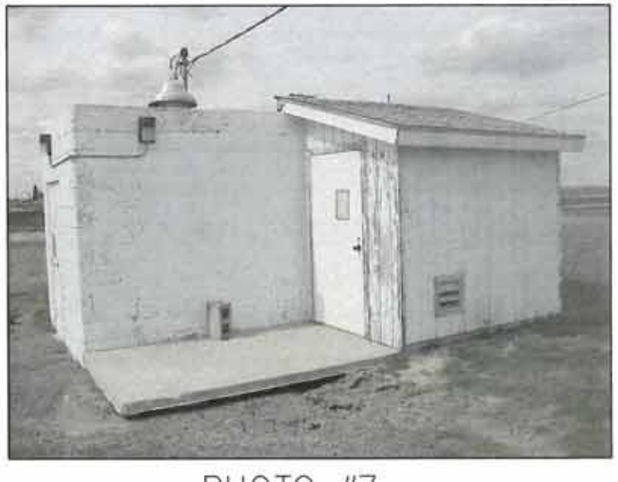


PHOTO #7

PHOTO #8

PHOTO #9

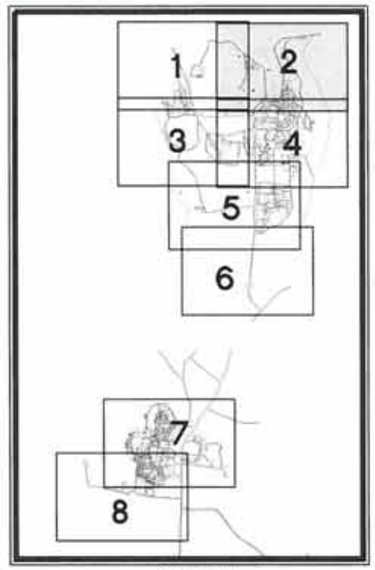
W-6
550,000 GALLON CONCRETE RESERVOIR
RECOMMENDATION-INSTALL NEW LINER
SEE PHOTOS- #10 AND #11
COST=$258,000

W-7
REPLACE FAILING 6" LEAD JOINT PIPE
250 LF OF 6" WATER PIPE
COST=$8,000

W-8
PROVIDE DOMESTIC WATER METERS AT 2 BLDGS. THIS SHEET
CAMPUS-WIDE COST=$100,000

LEGEND

- ANTICIPATED TO BE DEMOLISHED
- RATING 1-NEW CONDITION
- RATING 2-GOOD CONDITION
- RATING 3-FAIR CONDITION
- RATING 4-POOR
- RATING 5-FAILING




KEYMAP

NORTH

100 50 0 100 200

SCALE 1"=100' 22X34 FEET
1"=200' 11X17

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SCALE: 1"=100'

SHEET WA-2

ESH INFRASTRUCTURE MASTER PLAN

POTABLE WATER

DWN: CHF
CK'D: MAA
DATE:
DATE:
CADD FILE:

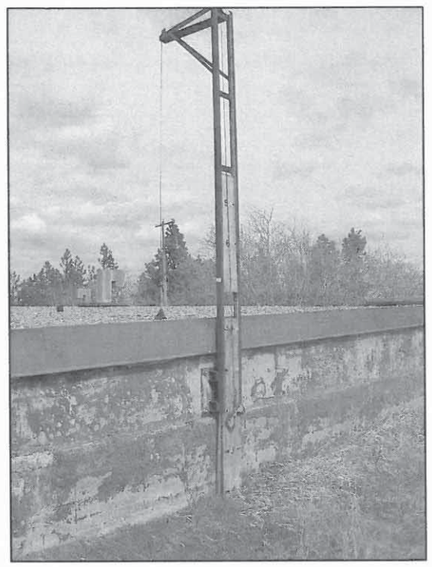


PHOTO #10

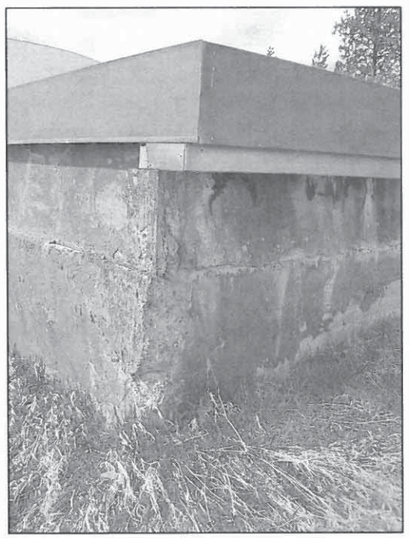
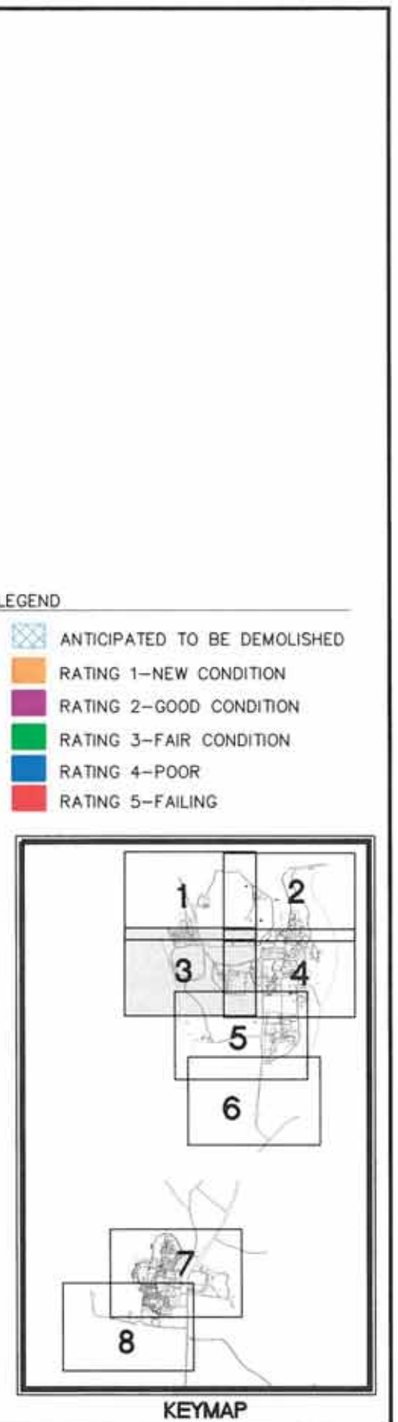


PHOTO #11

LEGEND

- ANTICIPATED TO BE DEMOLISHED
- RATING 1–NEW CONDITION
- RATING 2–GOOD CONDITION
- RATING 3–FAIR CONDITION
- RATING 4–POOR
- RATING 5–FAILING




KEYMAP

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SCALE: 1"=100'

SHEET WA-3

ESH INFRASTRUCTURE MASTER PLAN

POTABLE WATER

CASE FILE:

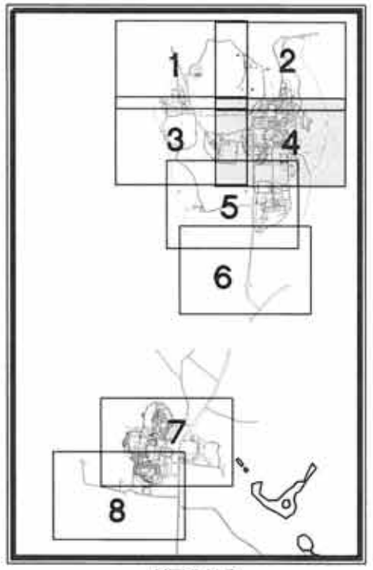
W-8
PROVIDE DOMESTIC WATER METERS AT ALL BLDGS.
3 BLDGS. THIS SHEET
CAMPUS-WIDE COST=$100,000

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

LEGEND

- ANTICIPATED TO BE DEMOLISHED
- RATING 1-NEW CONDITION
- RATING 2-GOOD CONDITION
- RATING 3-FAIR CONDITION
- RATING 4-POOR
- RATING 5-FAILING




KEYMAP

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SCALE: 1"=100'

SHEET WA-4

ESH INFRASTRUCTURE MASTER PLAN

POTABLE WATER

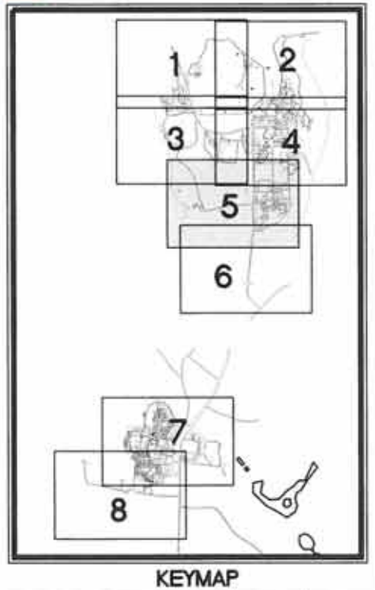
CAD FILE:

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

W-8
PROVIDE DOMESTIC WATER METERS AT ALL BLDGS.
6 BLDGS. TOTAL AT PINE LODGE CAMPUS-WIDE COST=$100,000

LEGEND

- ANTICIPATED TO BE DEMOLISHED
- RATING 1-NEW CONDITION
- RATING 2-GOOD CONDITION
- RATING 3-FAIR CONDITION
- RATING 4-POOR
- RATING 5-FAILING




KEYMAP

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1"=200' 11X17

REVISIONS

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SCALE: 1"=100'

SHEET WA-5

DWN: DHF DATE:
CK'D: MAA DATE:

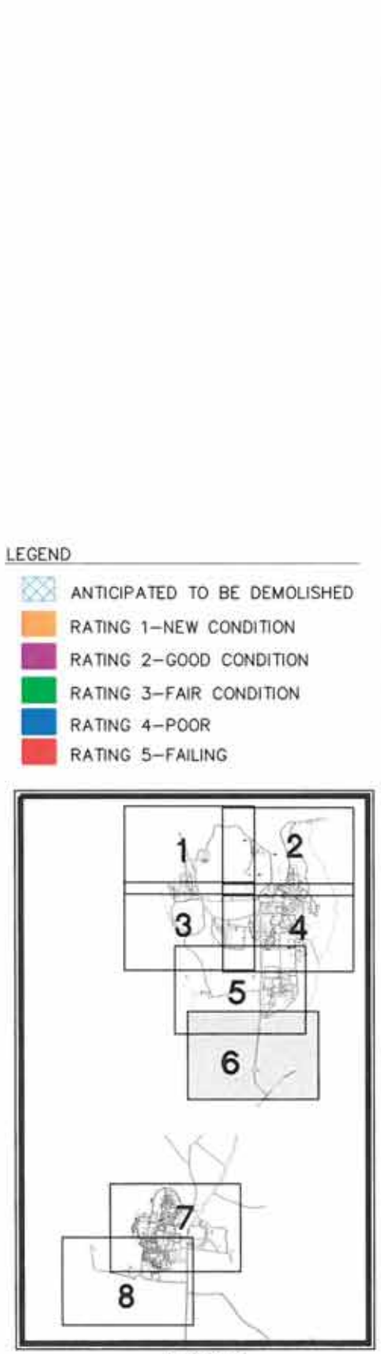
ESH INFRASTRUCTURE MASTER PLAN

POTABLE WATER

CADD FILE:

LEGEND

- ANTICIPATED TO BE DEMOLISHED
- RATING 1–NEW CONDITION
- RATING 2–GOOD CONDITION
- RATING 3–FAIR CONDITION
- RATING 4–POOR
- RATING 5–FAILING




KEYMAP

NORTH

100 50 0 100 200

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1"=200' 11X17

REVISIONS

DWN: SHF
CK'D: MAA
DATE:
DATE:

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SCALE: 1"=100'

SHEET
WA-6

ESH INFRASTRUCTURE MASTER PLAN

POTABLE WATER

CROSS FILE:

W-10
REPLACE HOT WATER EXPANSION COUPLINGS IN WALK-THROUGH TUNNELS (COND. 4)
ESTIMATED 16 COUPLINGS (ALL OF LAKELAND VILLAGE)
COST=$8,000

W-10
REPLACE HOT WATER EXPANSION COUPLINGS IN NON-ACCESSIBLE TUNNELS ON AS-NEEDED BASIS (COND. 3)
COST ON CASE-BY-CASE BASIS

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

W-13
REPLACE ± 90 LF OF LEAKY 12" WATER LINE, COST=$4,000
INSTALL FLOW CONTROL VALVE
COST=$12,000

W-14
RELOCATE 6" WATER LINE FROM UNDER AUTO SHOP
120 LF OF 6" PIPE
COST=$5,000

W-8
PROVIDE DOMESTIC WATER METERS AT ALL BLDGS.
40 BLDGS. TOTAL AT LV
CAMPUS-WIDE COST=$100,000

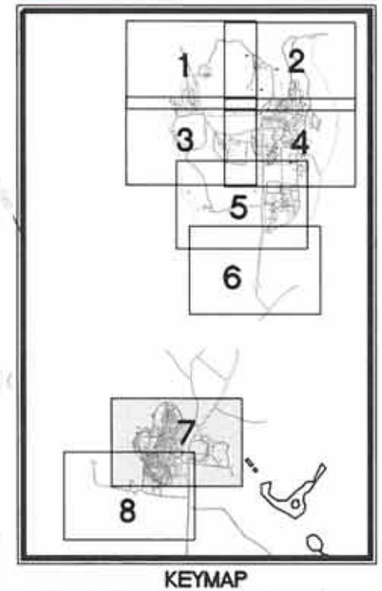
W-12
ADD 8" WATER LINE LOOP AND HYDRANT
620 LF 8" WATER & HYDRANT
COST=$28,000

W-9
REPLACE HOT WATER MAKE-UP HEATERS IN COTTAGES
POOR CONDITION
SEE PHOTO #
12 LOCATIONS
COST=$500/HEATER = $6,000

W-11
INSTALL PRESSURE REDUCING VALVE ON 8" LINE
COST=$12,000

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

LEGEND
- ANTICIPATED TO BE DEMOLISHED
- RATING 1-NEW CONDITION
- RATING 2-GOOD CONDITION
- RATING 3-FAIR CONDITION
- RATING 4-POOR
- RATING 5-FAILING



KEYMAP

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SCALE: 1"=100'

SHEET WA-7

DWN: CHF DATE:
CK'D: MAA DATE:

ESH INFRASTRUCTURE MASTER PLAN

POTABLE WATER

DATE FILE:

W-10 REPLACE HOT WATER EXPANSION COUPLINGS IN NON-ACCESSIBLE TUNNELS ON AS-NEEDED BASIS
(COND. 3)
COST ON CASE-BY-CASE BASIS

W-15
ADD 8" WATER LINE LOOP ACROSS HIGHWAY TO APPARTMENTS
610 LF OF 8" WATER PIPE
COST=$29,000

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

W-10 REPLACE HOT WATER EXPANSION COUPLINGS IN WALK-THROUGH TUNNELS
(COND. 4)
ESTIMATED 16 COUPLINGS (ALL OF LAKELAND VILLAGE)
COST=$8,000

W-8
PROVIDE DOMESTIC WATER METERS AT ALL BLDGS.
40 BLDGS. TOTAL AT LV
CAMPUS-WIDE COST=$100,000

LEGEND

- ANTICIPATED TO BE DEMOLISHED
- RATING 1-NEW CONDITION
- RATING 2-GOOD CONDITION
- RATING 3-FAIR CONDITION
- RATING 4-POOR
- RATING 5-FAILING

NORTH

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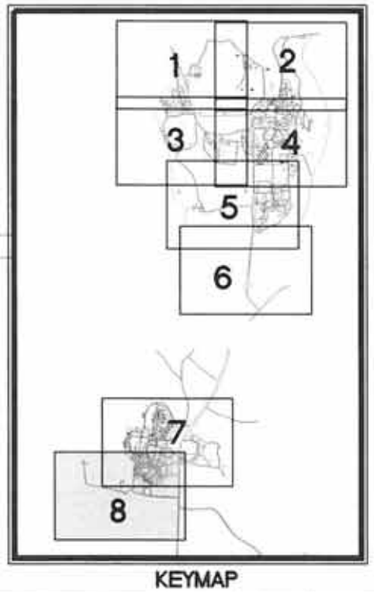


KEYMAP

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DATE:

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SCALE: 1"=100'

SHEET WA-8

ESH INFRASTRUCTURE MASTER PLAN

POTABLE WATER

DWG FILE:

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

LEGEND

- ANTICIPATED TO BE DEMOLISHED
- RATING 1–NEW CONDITION
- RATING 2–GOOD CONDITION
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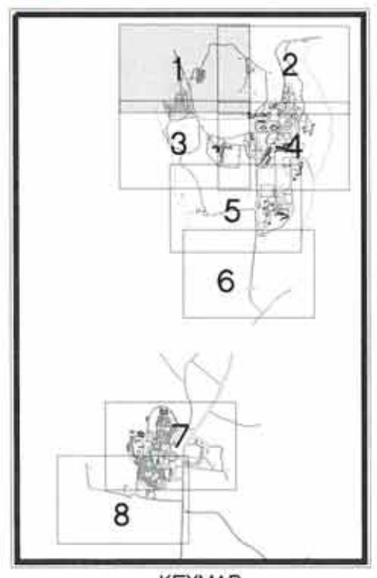
- RATING 4–POOR
- RATING 5–FAILING

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SCALE: 1"=100'

SHEET: SD-1

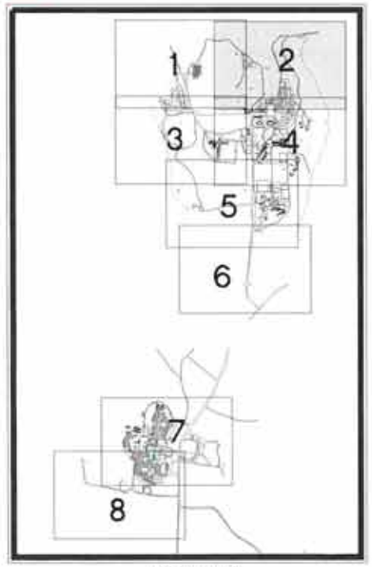
ESH INFRASTRUCTURE MASTER PLAN

STORM WATER

CADD FILE:

LEGEND

- ANTICIPATED TO BE DEMOLISHED
- RATING 1–NEW CONDITION
- RATING 2–GOOD CONDITION
- RATING 3–FAIR CONDITION
- RATING 4–POOR
- RATING 5–FAILING




KEYMAP

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SCALE: 1"=100'

SHEET SD-2

ESH INFRASTRUCTURE MASTER PLAN

STORM WATER

CADD FILE: ------

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

LEGEND

- ANTICIPATED TO BE DEMOLISHED
- RATING 1–NEW CONDITION
- RATING 2–GOOD CONDITION
- RATING 3–FAIR CONDITION
- RATING 4–POOR
- RATING 5–FAILING

KEYMAP

NORTH

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SCALE: 1"=100' 22X34 FEET
1"=200' 11X17

REVISIONS

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SCALE: 1"=100'

SHEET SD-3

ESH INFRASTRUCTURE MASTER PLAN

STORM WATER

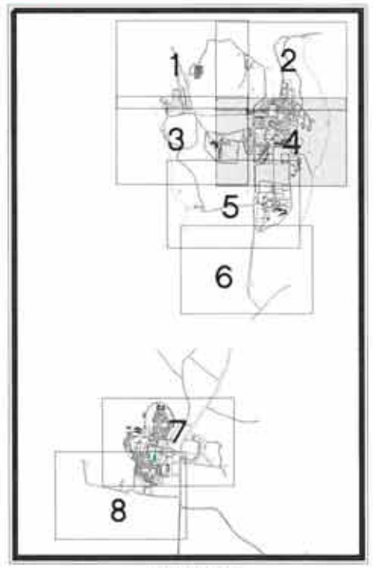
CADD FILE:

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

LEGEND

- ANTICIPATED TO BE DEMOLISHED
- RATING 1–NEW CONDITION
- RATING 2–GOOD CONDITION
- RATING 3–FAIR CONDITION
- RATING 4–POOR
- RATING 5–FAILING




KEYMAP

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1"=200' 11X17

REVISIONS

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SCALE: 1"=100'

SHEET SD-4

ESH INFRASTRUCTURE MASTER PLAN

STORM WATER

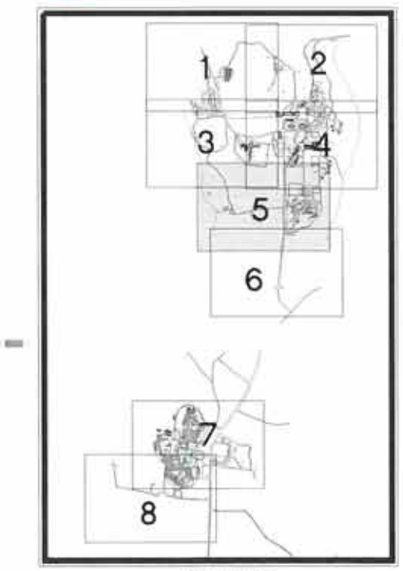
DWN: GHF DATE: ------
CK'D: MAA DATE: ------

CADD FILE: ------

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

LEGEND

- ANTICIPATED TO BE DEMOLISHED
- RATING 1–NEW CONDITION
- RATING 2–GOOD CONDITION
- RATING 3–FAIR CONDITION
- RATING 4–POOR
- RATING 5–FAILING




KEYMAP

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1"=200' 11x17

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SCALE: 1"=100'

SHEET SD-5

ESH INFRASTRUCTURE MASTER PLAN

STORM WATER

CADD FILE:

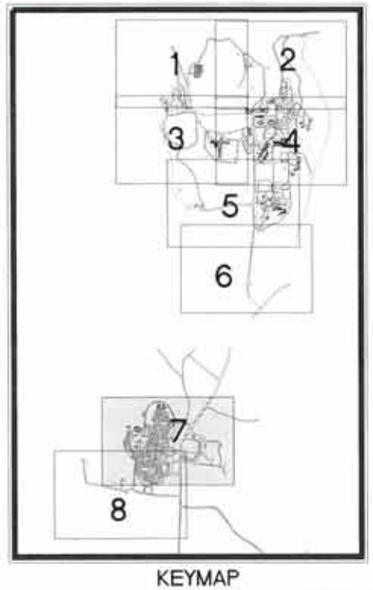
STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

LEGEND

- ANTICIPATED TO BE DEMOLISHED
- RATING 1–NEW CONDITION
- RATING 2–GOOD CONDITION
- RATING 3–FAIR CONDITION
- RATING 4–POOR
- RATING 5–FAILING




KEYMAP

NORTH

100 50 0 100 200

SCALE 1"=100' 22X34 FEET
1"=200' 11X17

REVISIONS:

DWN: GHF DATE:
CK'D: MAA DATE:

Taylor Engineering, Inc.
Civil Design and Land Planning
W. 100 Mission Ave.
Spokane, Washington 99201
(509) 328-3371 FAX (509) 328-8224

SCALE: 1"=100'

SHEET SD-7

ESH INFRASTRUCTURE MASTER PLAN

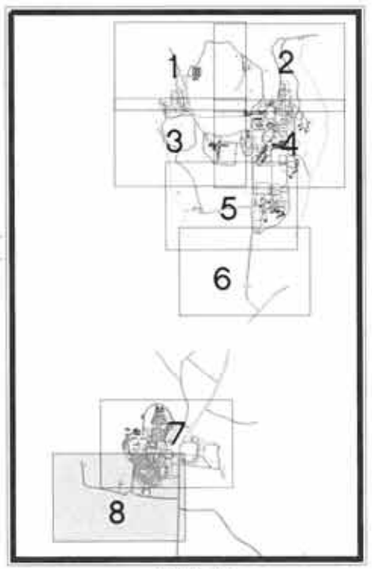
STORM WATER

CADD FILE:

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

LEGEND

- ANTICIPATED TO BE DEMOLISHED
- RATING 1–NEW CONDITION
- RATING 2–GOOD CONDITION
- RATING 3–FAIR CONDITION
- RATING 4–POOR
- RATING 5–FAILING




KEYMAP

100 50 0 100 200

SCALE 1"=100' 22X34 FEET
1"=200' 11X17

REVISIONS

Taylor Engineering, Inc.
Civil Design and Land Planning
W. 108 Mission Ave.
Spokane, Washington 99201
(509) 328-3371 FAX (509) 328-8224

SCALE: 1"=100'

SHEET SD-8

ESH INFRASTRUCTURE MASTER PLAN

STORM WATER

DWN: DHF DATE: ------
CK'D: MAA DATE: ------

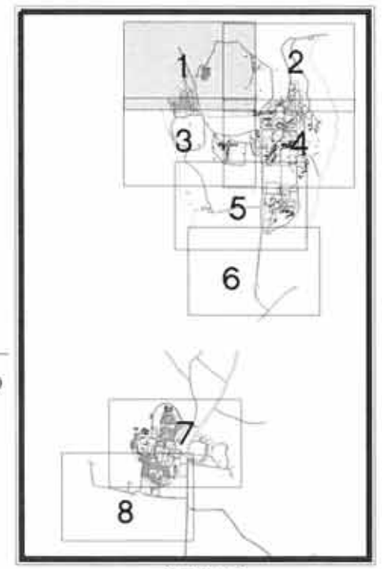
CADD FILE: ------

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

IR-5
REPLACE 2,800 LF OF 8"
IRRIGATION MAIN (COND. 5)
COST (SHTS. IR-1, IR-3, IR-5)
=$84,000

LEGEND

- ANTICIPATED TO BE DEMOLISHED
- RATING 1-NEW CONDITION
- RATING 2-GOOD CONDITION
- RATING 3-FAIR CONDITION
- RATING 4-POOR
- RATING 5-FAILING




KEYMAP

NORTH

100 50 0 100 200

SCALE 1"=100' 22X34 FEET
1"=200' 11X17

REVISIONS

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CK'D: MAA DATE:

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W. 106 Mission Ave.
Spokane, Washington 99201
(509) 328-3371 FAX (509) 328-8224

SCALE: 1"=100'

SHEET L-1

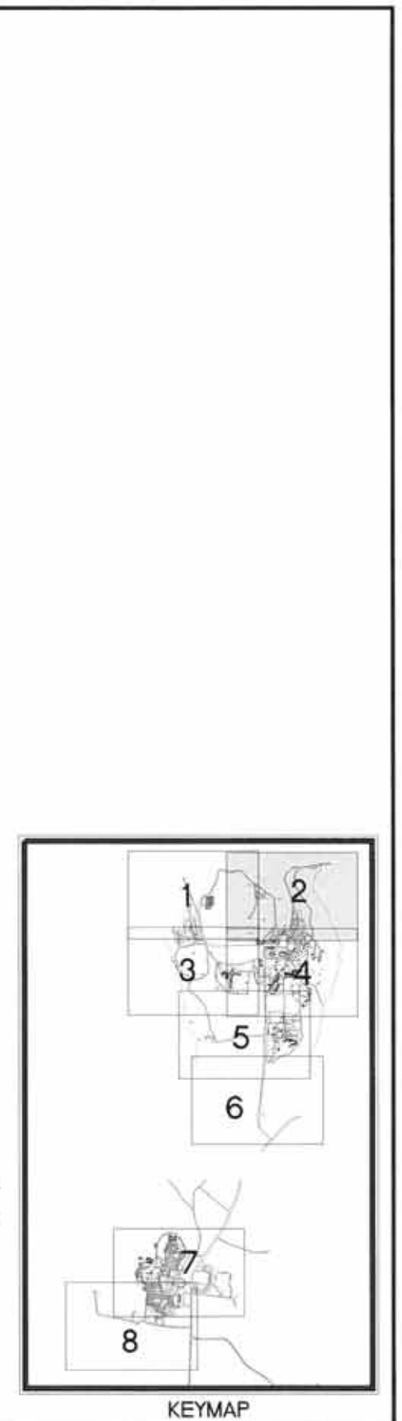
ESH INFRASTRUCTURE MASTER PLAN

IRRIGATION SYSTEM

CADD FILE:

LEGEND

- ANTICIPATED TO BE DEMOLISHED
- RATING 1–NEW CONDITION
- RATING 2–GOOD CONDITION
- RATING 3–FAIR CONDITION
- RATING 4–POOR
- RATING 5–FAILING




KEYMAP

NORTH

100 50 0 100 200

SCALE 1"=100' 22X34 FEET
1"=200' 11X17

REVISIONS

DWN: GHF DATE:
CK'D: MAA DATE:

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Civil Design and Land Planning
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Spokane, Washington 99201
(509) 328-3371 FAX (509) 328-8224

SCALE: 1"=100'

SHEET L-2

ESH INFRASTRUCTURE MASTER PLAN

IRRIGATION SYSTEM

CADD FILE:

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

IR-2
IRRIGATION PUMP STATION
REPLACE PUMP MOTOR
SEE PHOTO-#1 AND #2
COST=$11,000

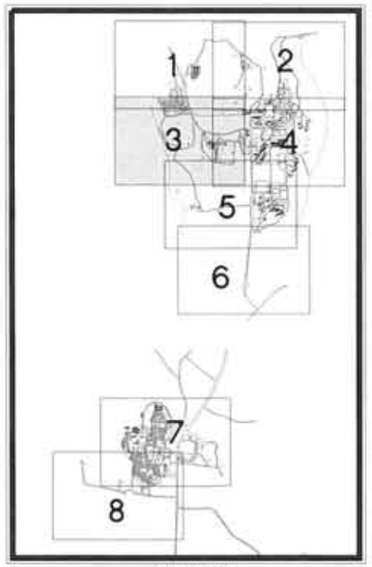
IR-5
REPLACE 2,800 LF OF 8"
IRRIGATION MAIN (COND. 5)
COST (SHTS. IR-1, IR-3, IR-5)
=$84,000

IR-4
REPLACE 1,350 LF OF 8"
IRRIGATION MAIN (COND. 4)
COST (SHTS. IR-3 AND IR-4)
=$40,500

IR-3
REPLACE 1,175 LF OF 8"
IRRIGATION MAIN (COND. 5)
COST=$35,000

LEGEND

- ANTICIPATED TO BE DEMOLISHED
- RATING 1-NEW CONDITION
- RATING 2-GOOD CONDITION
- RATING 3-FAIR CONDITION
- RATING 4-POOR
- RATING 5-FAILING




KEYMAP

NORTH

100 50 0 100 200

SCALE: 1"=100' 22X34 FEET
1"=200' 11X17

REVISIONS

DWN: QHF DATE:
CK'D: MAA DATE:

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Civil Design and Land Planning
W. 106 Mission Ave.
Spokane, Washington 99201
(509) 328-3371 FAX (509) 328-8224

SCALE: 1"=100'

SHEET L-3

ESH INFRASTRUCTURE MASTER PLAN

IRRIGATION SYSTEM

CADD FILE:

PHOTO #1

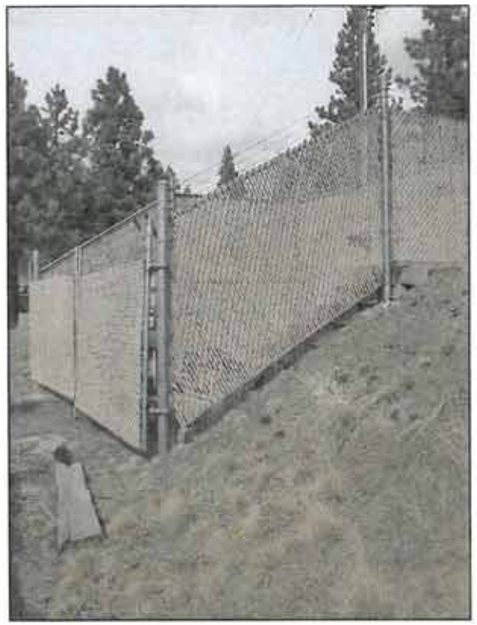


PHOTO #2

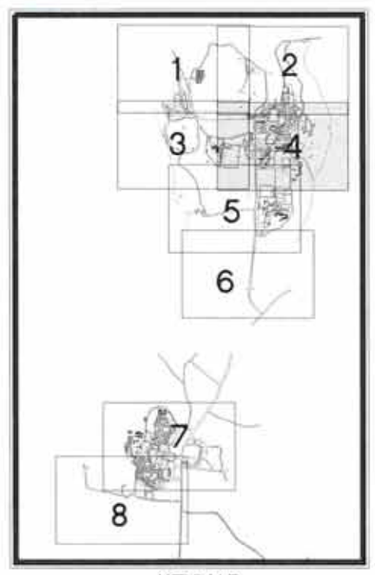
STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

IR-4
REPLACE 1,350 LF OF 8" IRRIGATION MAIN (COND. 4) COST (SHTS. IR-3 AND IR-4) =$40,500

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

LEGEND

- ANTICIPATED TO BE DEMOLISHED
- RATING 1-NEW CONDITION
- RATING 2-GOOD CONDITION
- RATING 3-FAIR CONDITION
- RATING 4-POOR
- RATING 5-FAILING




KEYMAP

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1"=200' 11X17

REVISIONS

Taylor Engineering, Inc.
Civil Design and Land Planning
W. 196 Mission Ave.
Spokane, Washington 99201
(509) 328-3371 FAX (509) 328-8224

SCALE: 1"=100'

SHEET L-4

DWN: GNF DATE:
CK'D: MAA DATE:

ESH INFRASTRUCTURE MASTER PLAN

IRRIGATION SYSTEM

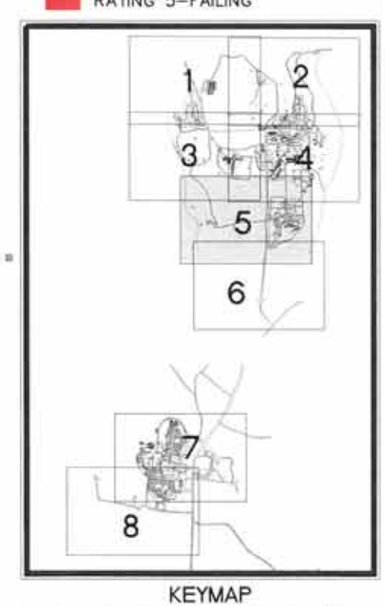
CADD FILE:

IR-5
REPLACE 2,800 LF OF 8"
IRRIGATION MAIN (COND. 5)
COST (SHTS. IR-1, IR-3, IR-5)
=$84,000

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

LEGEND

- ANTICIPATED TO BE DEMOLISHED
- RATING 1-NEW CONDITION
- RATING 2-GOOD CONDITION
- RATING 3-FAIR CONDITION
- RATING 4-POOR
- RATING 5-FAILING




KEYMAP

NORTH

100 50 0 100 200

SCALE 1"=100' 22X34 FEET
1"=200' 11X17

REVISIONS

Taylor Engineering, Inc.
Civil Design and Land Planning
N. 106 Mission Ave.
Spokane, Washington 99201
(509) 328-3371 FAX (509) 328-8224

SCALE: 1"=100'

SHEET L-5

DWN: GHF DATE: -----
CK'D: MAA DATE: -----

ESH INFRASTRUCTURE MASTER PLAN

IRRIGATION SYSTEM

CADD FILE: -----

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

LEGEND

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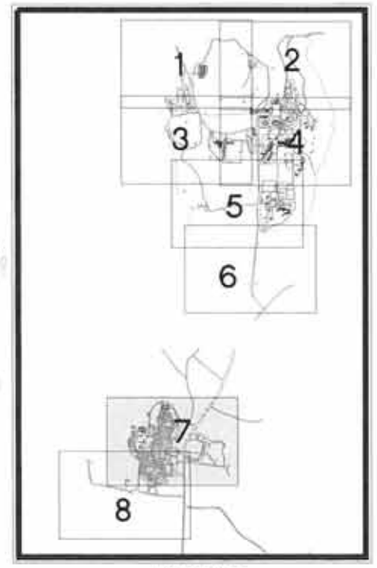


KEYMAP

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SCALE: 1"=100'

SHEET L-7

ESH INFRASTRUCTURE MASTER PLAN

IRRIGATION SYSTEM

DWN: GHF DATE:
CK'D: MAA DATE:

CADD FILE:

IR–1
IRRIGATION RESERVOIR
RECOMMEND–REPLACE LINER
SEE PHOTOS #3 AND #4
COST=$143,000

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

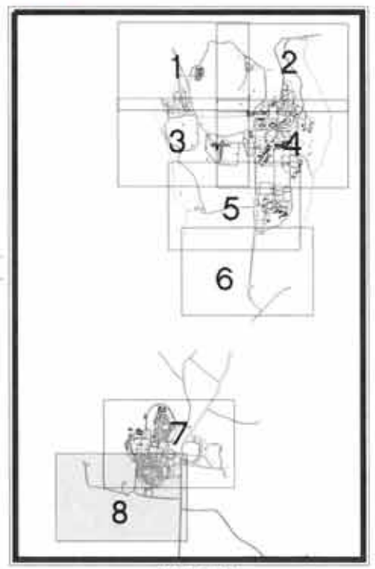
IR–6
REPLACE APPROX. 6,114 LF OF 10" STEEL IRRIGATION MAIN (COND. 5) TO CLEAR LAKE RECREATION AREA
COST=$40,500

(cancelled; use domestic water at Clear Lake for irrigation to minimize cost)

CONTINUES 4,400'± TO CLEAR LAKE RECREATION AREA

LEGEND

- ANTICIPATED TO BE DEMOLISHED
- RATING 1–NEW CONDITION
- RATING 2–GOOD CONDITION
- RATING 3–FAIR CONDITION
- RATING 4–POOR
- RATING 5–FAILING




KEYMAP

NORTH

100 50 0 100 200

SCALE 1"=100' 22X34 FEET
1"=200' 11X17

REVISIONS

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SCALE: 1"=100'

SHEET L-8

DWN: GHF DATE:
CK'D: MAA DATE:

ESH INFRASTRUCTURE MASTER PLAN

IRRIGATION SYSTEM

CADD FILE:

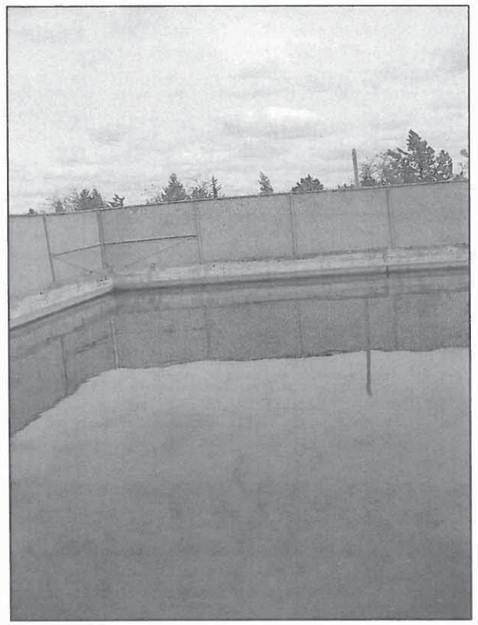


PHOTO #3

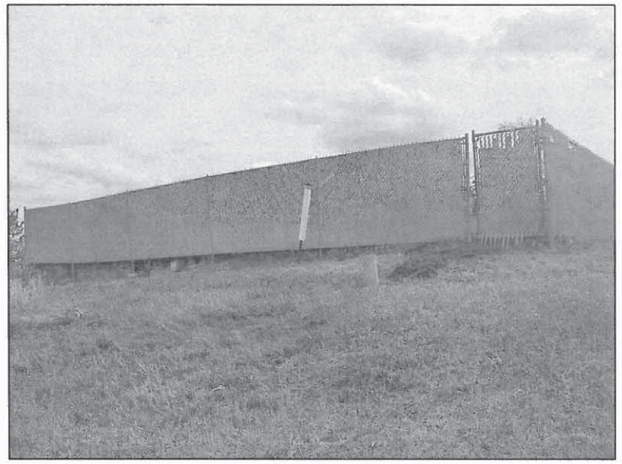
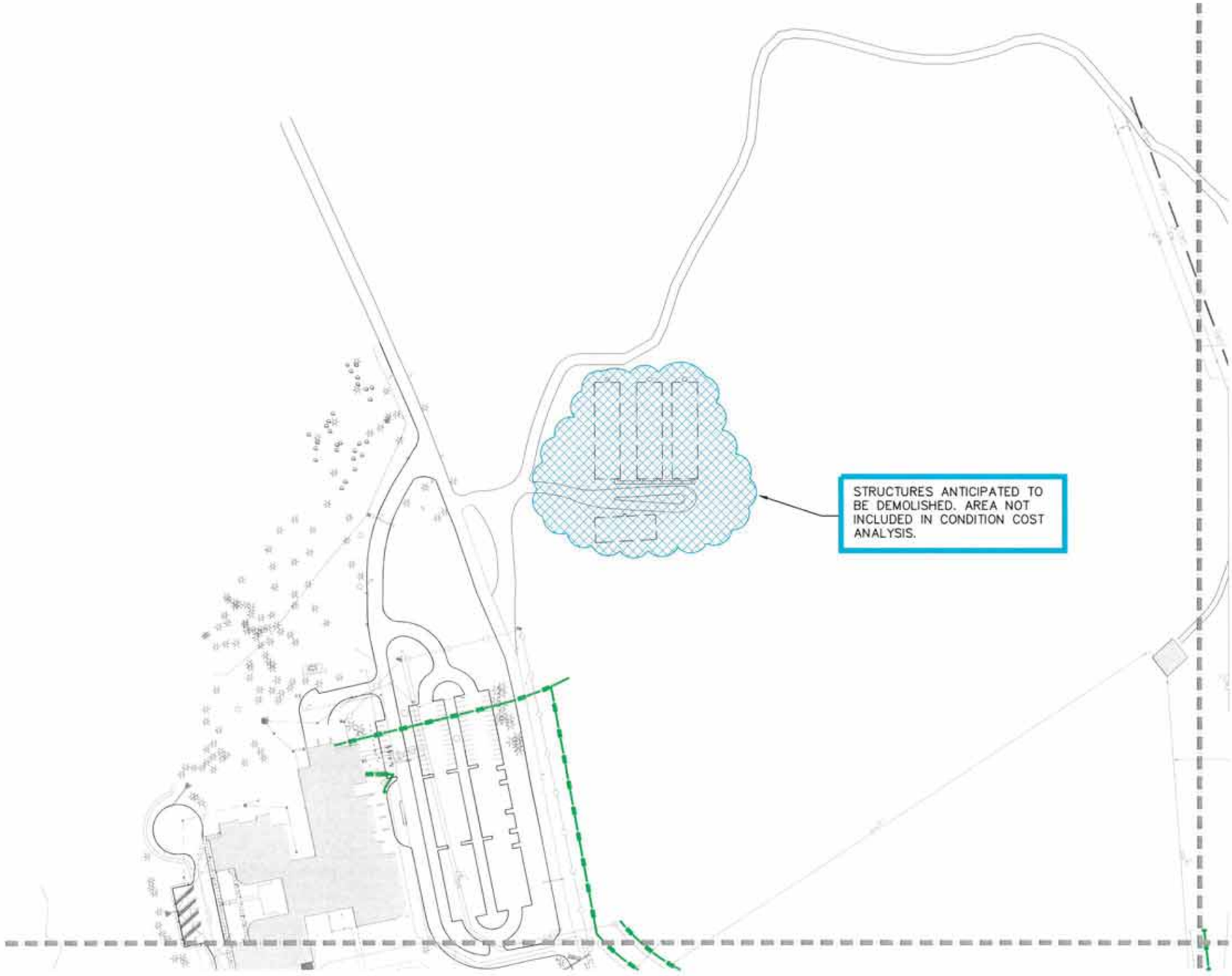


PHOTO #4




LEGEND

- ANTICIPATED TO BE DEMOLISHED
- RATING 1–NEW CONDITION
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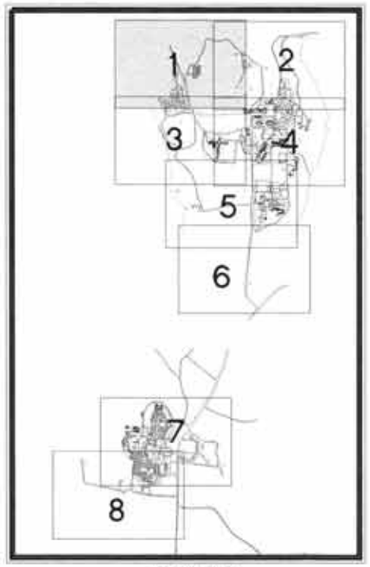
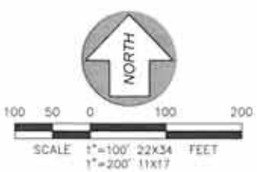
- RATING 3–FAIR CONDITION
- RATING 4–POOR
- RATING 5–FAILING




KEYMAP




REVISIONS

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Spokane, Washington 99201
(509) 328-3371 FAX (509) 328-8224

SCALE: 1"=100'

SHEET NG-1

DWN: GHF DATE:
CK'D: MAA DATE:

ESH INFRASTRUCTURE MASTER PLAN

NATURAL GAS

CADD FILE:

AVISTA GAS MAIN

LEGEND

- ANTICIPATED TO BE DEMOLISHED
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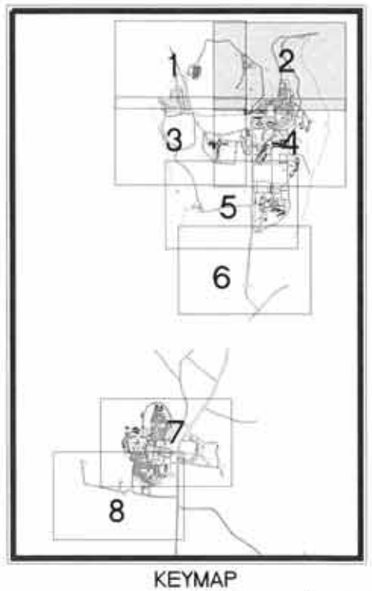
- RATING 4–POOR
- RATING 5–FAILING




KEYMAP

NORTH

100 50 0 100 200

SCALE 1"=100' 22X34 FEET
1"=200' 11x17

REVISIONS

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Spokane, Washington 99201
(509) 328-3371 FAX (509) 328-8224

SCALE: 1"=100'

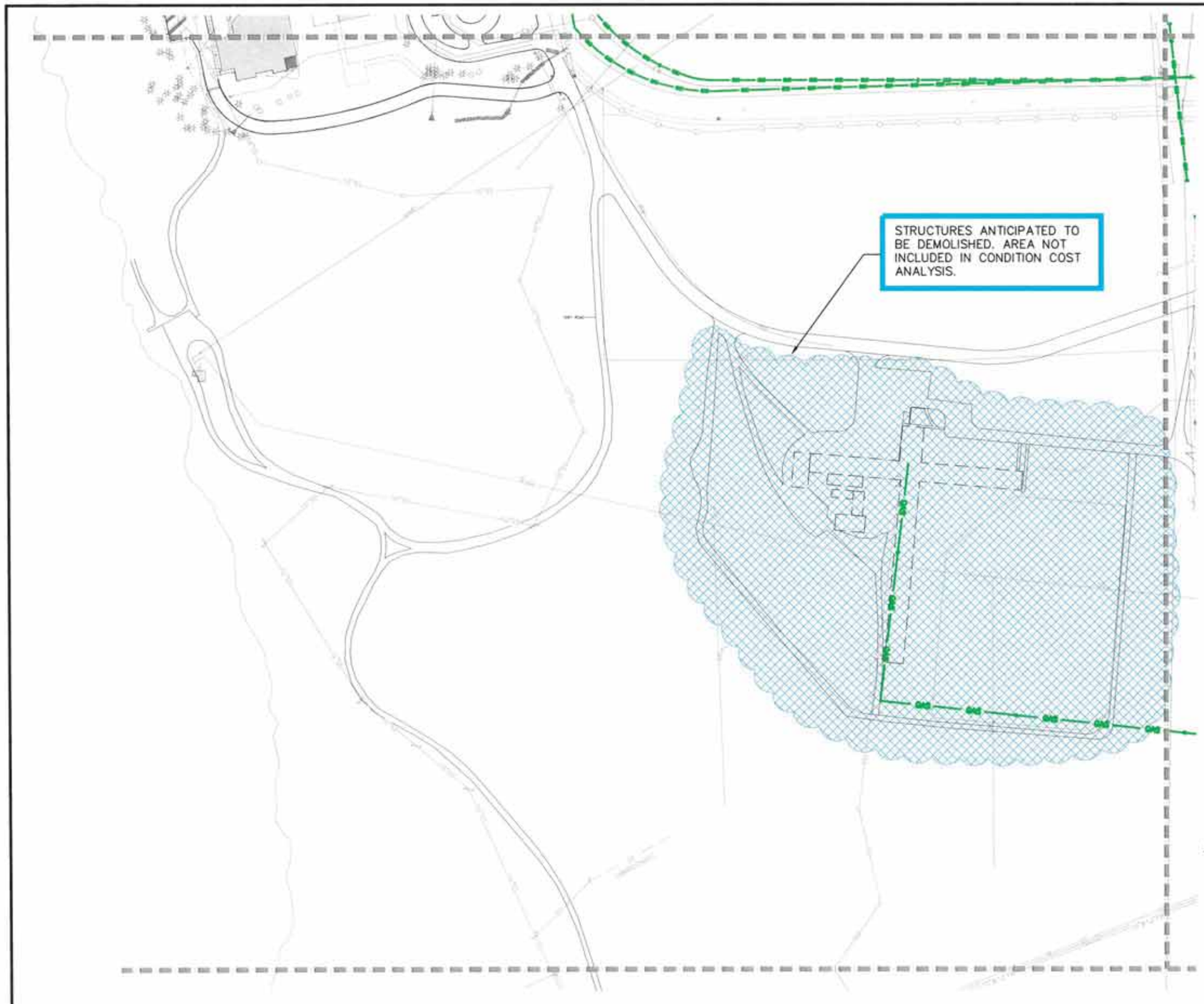
SHEET NG-2

ESH INFRASTRUCTURE MASTER PLAN

NATURAL GAS

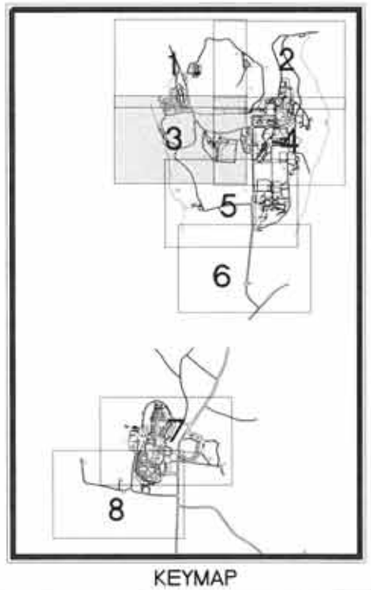
DWN: SHF DATE:
CK'D: MAA DATE:

CADD FILE:




LEGEND

- ANTICIPATED TO BE DEMOLISHED
- RATING 1–NEW CONDITION
- RATING 2–GOOD CONDITION
- RATING 3–FAIR CONDITION
- RATING 4–POOR
- RATING 5–FAILING




KEYMAP

NORTH

100 50 0 100 200

SCALE: 1"=100' 22X34 FEET
1"=200' 11X17

REVISIONS

Taylor Engineering, Inc.
Civil Design and Land Planning
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Spokane, Washington 99201
(509) 328-3371 FAX (509) 328-8224

SCALE: 1"=100'

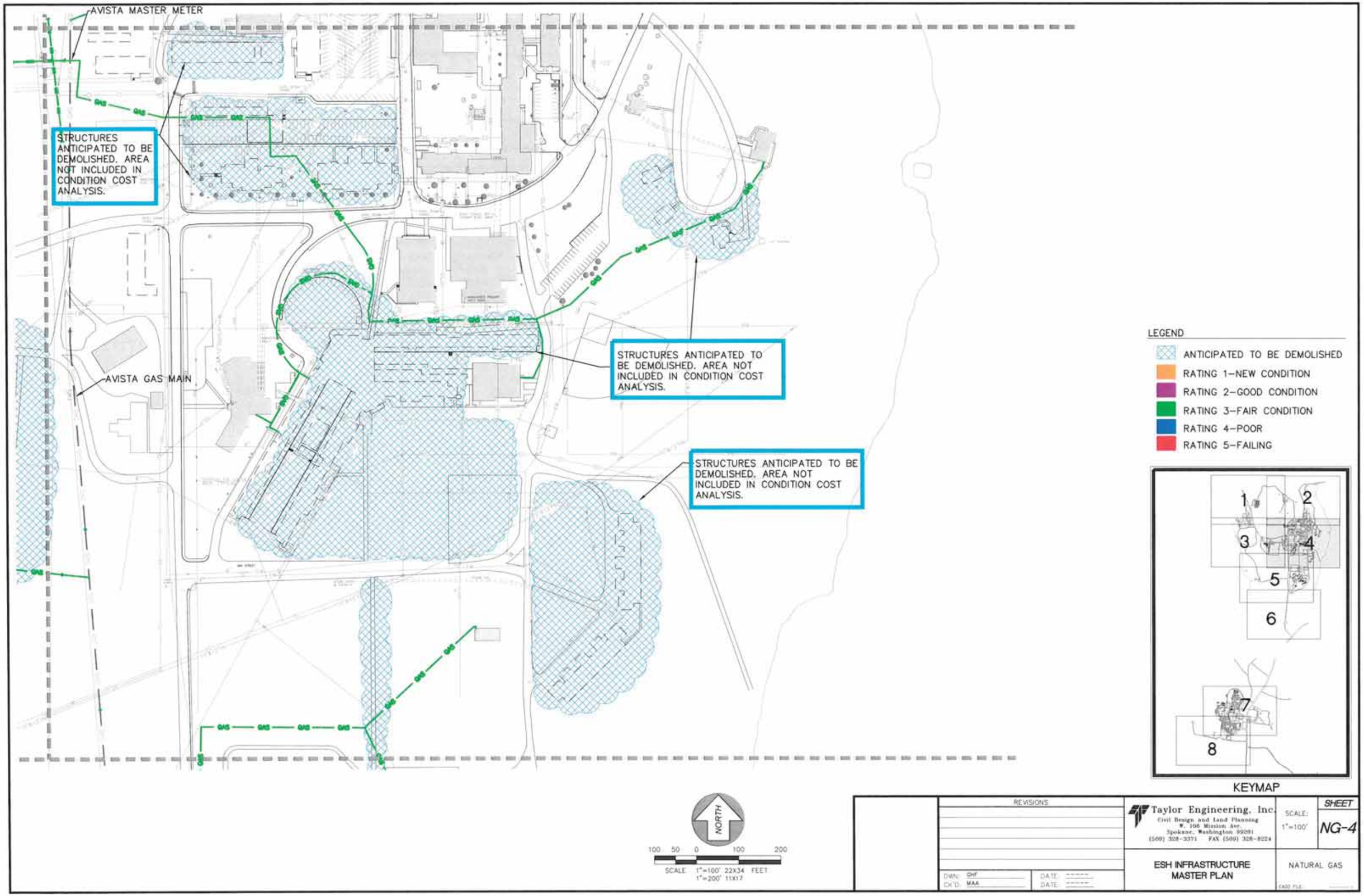
SHEET NG-3

DWN: CHF DATE:
CK'D: MAA DATE:

ESH INFRASTRUCTURE MASTER PLAN

NATURAL GAS

CADD FILE:


AVISTA MASTER METER
STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.
AVISTA GAS MAIN
STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.
STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.
LEGEND
ANTICIPATED TO BE DEMOLISHED
RATING 1–NEW CONDITION
RATING 2–GOOD CONDITION
RATING 3–FAIR CONDITION
RATING 4–POOR
RATING 5–FAILING
1
2
3
4
5
6
7
8
KEYMAP
NORTH
100 50 0 100 200
SCALE 1"=100' 22X34 FEET
1"=200' 11X17
REVISIONS
DWN: GHF
CK'D: MAA
DATE:
DATE:
Taylor Engineering, Inc.
Civil Design and Land Planning
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Spokane, Washington 99201
(509) 328-3371 FAX (509) 328-8224
SCALE: 1"=100'
SHEET
NG-4
ESH INFRASTRUCTURE MASTER PLAN
NATURAL GAS
CADD FILE

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

LEGEND

- ANTICIPATED TO BE DEMOLISHED
- RATING 1–NEW CONDITION
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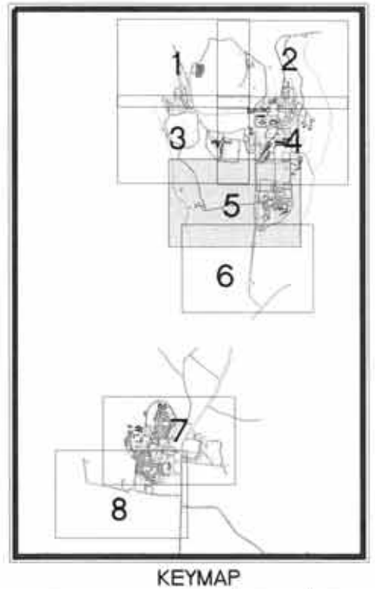
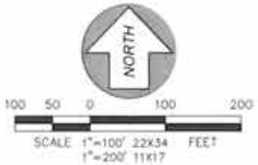
- RATING 4–POOR
- RATING 5–FAILING




KEYMAP




REVISIONS

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Taylor Engineering, Inc.
Civil Design and Land Planning
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Spokane, Washington 99201
(509) 328-3371 FAX (509) 328-8224

SCALE: 1"=100'

SHEET NG-5

ESH INFRASTRUCTURE MASTER PLAN

NATURAL GAS

CADD FILE:

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

STRUCTURES ANTICIPATED TO BE DEMOLISHED. AREA NOT INCLUDED IN CONDITION COST ANALYSIS.

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LEGEND

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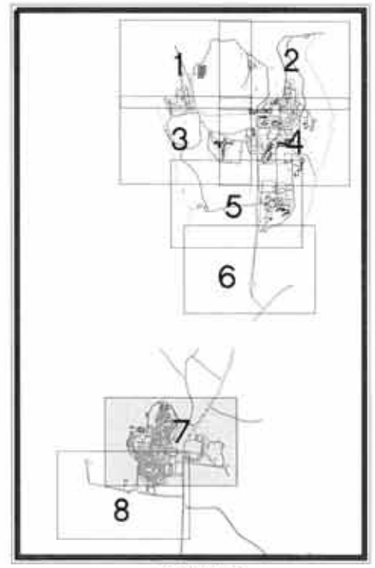
- RATING 4–POOR
- RATING 5–FAILING

NORTH

100 50 0 100 200

SCALE 1"=100' 22X34 FEET
1"=200' 11X17




KEYMAP

REVISIONS

DWN: CHF
CK'D: MAA
DATE:
DATE:

Taylor Engineering, Inc.
Civil Design and Land Planning
W. 106 Mission Ave.
Spokane, Washington 99201
(509) 328-3371 FAX (509) 328-8224

SCALE: 1"=100'

SHEET NG-7

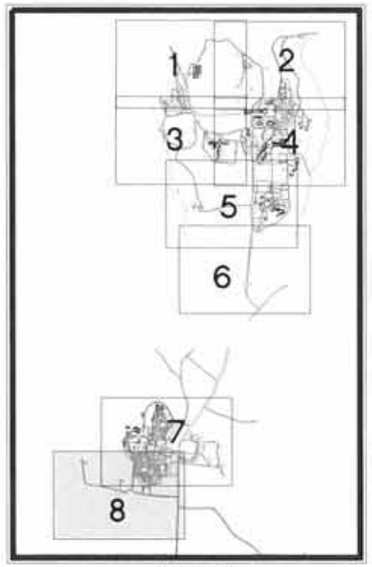
ESH INFRASTRUCTURE MASTER PLAN

NATURAL GAS

DATED FILE:

LEGEND

- ANTICIPATED TO BE DEMOLISHED
- RATING 1–NEW CONDITION
- RATING 2–GOOD CONDITION
- RATING 3–FAIR CONDITION
- RATING 4–POOR
- RATING 5–FAILING

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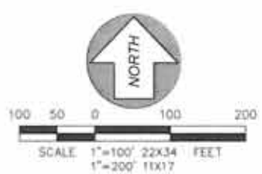


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Spokane, Washington 99201
(509) 328-3371 FAX (509) 328-8224

SCALE: 1"=100'

SHEET NG-8

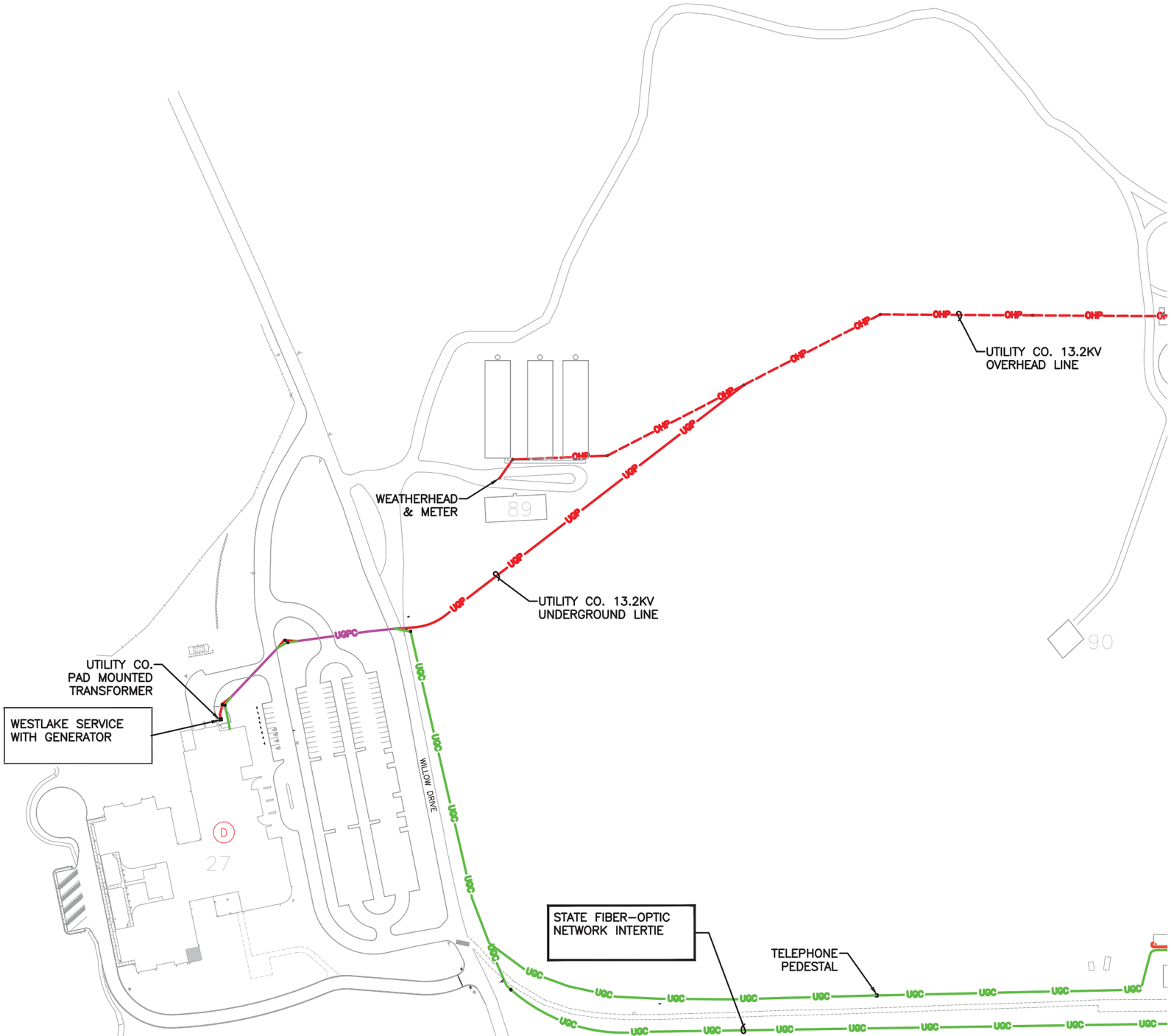
ESH INFRASTRUCTURE MASTER PLAN

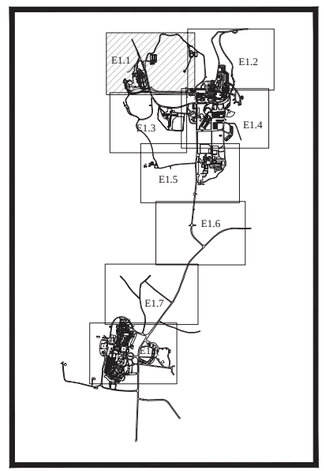
NATURAL GAS

DATE FILE:

## LEGEND – SHEETS E-1 THRU E-8

- PRIMARY POWER
- COMMUNICATIONS
- SECONDARY POWER
- POWER AND COMMUNICATIONS COMBINED
- BUILDINGS TO REMAIN ON CAMPUS BACK-UP POWER
- 2-2 TILTED PAD MOUNTED TRANSFORMERS
- (C) CALL SYSTEM PROPOSED (ASSISTED LIVING FACILITY)
- (D) PERSONAL DURESS ALARM SYSTEM
- (F) NEW FIRE ALARM SYSTEM PROPOSED
- (T) TENANT FIBER-OPTIC CONNECTION PROPOSED




KEYMAP

NORTH

100 50 0 100 200

SCALE FEET

REVISIONS

PCI Pennell Consulting Inc.
Electrical and Electronics System Design
400 S. Jefferson, Suite 301
Spokane, WA 99204
(T) 509.747.1888 (F) 509.747.1872

SCALE: 1" = 100'

SHEET E-1

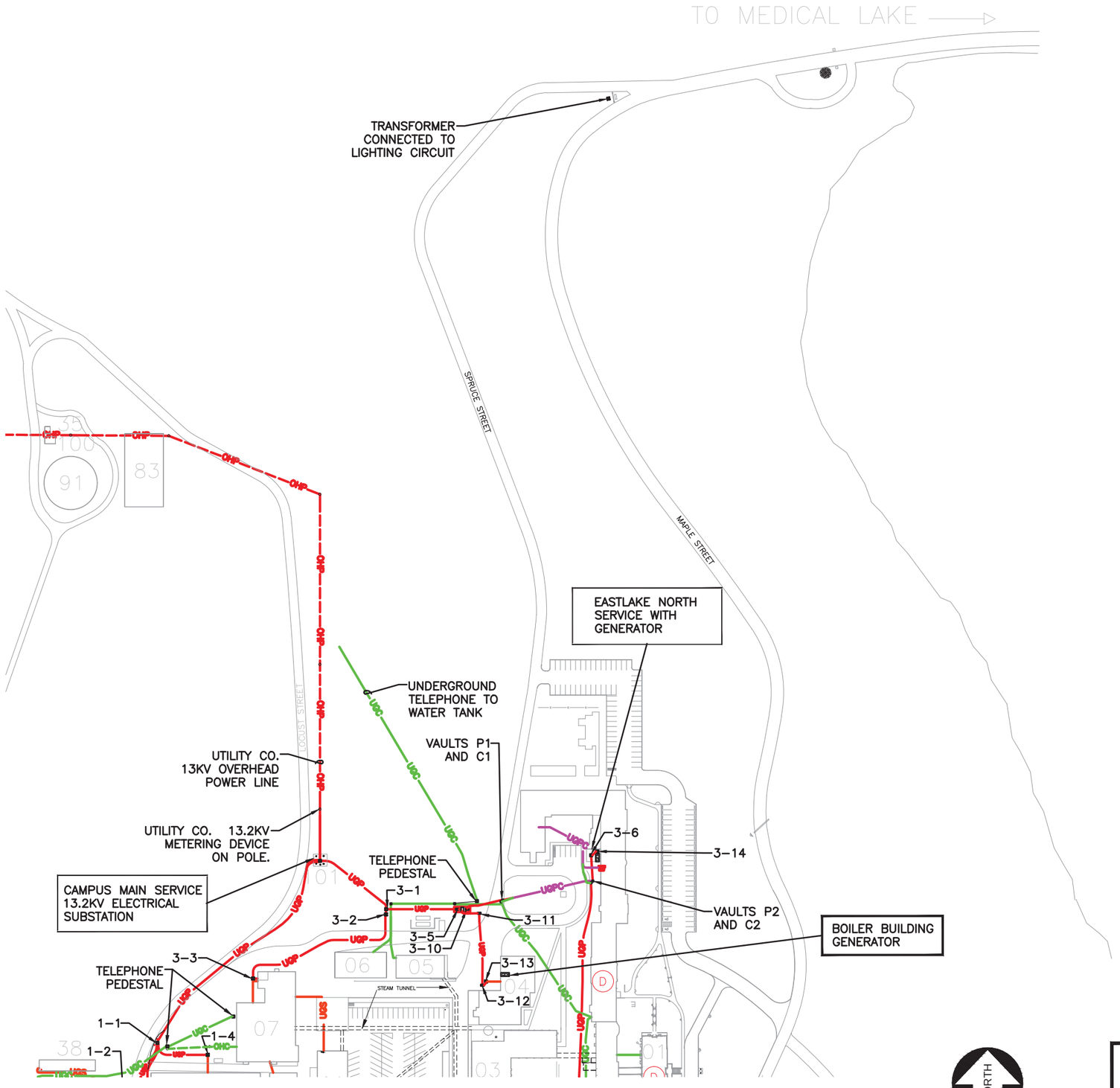
DWN: DAD
CK'D: RCP

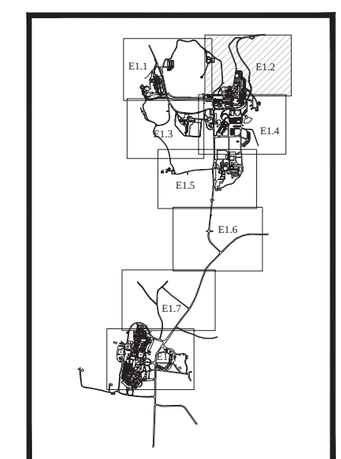
DATE: ---------
DATE: ---------

**ESH INFRASTRUCTURE MASTER PLAN**

ELECTRICAL

CADD FILE:




KEYMAP

| REVISIONS | | | |
|---|---|---|---|
| DWN: DAD | DATE: -------- | | |
| CK'D: RCP | DATE: -------- | | |

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SHEET E-2

ESH INFRASTRUCTURE MASTER PLAN

ELECTRICAL

CADD FILE:

STATE FIBER–OPTIC NETWORK INTERTIE

TELEPHONE PEDESTAL

UGC

MAPLE STREET

40

13.2KV AVISTA OVERHEAD LINE

OHP

98

99

92

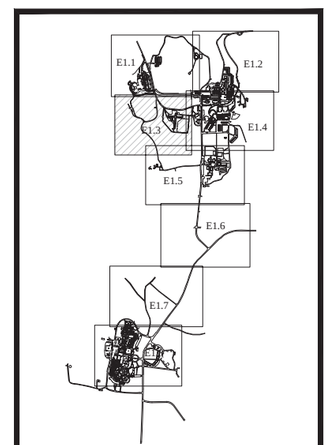
93

94

NORTH

100 50 0 100 200

SCALE FEET




KEYMAP

REVISIONS

DWN: DAD
CK'D: RCP
DATE: ---------
DATE: ---------

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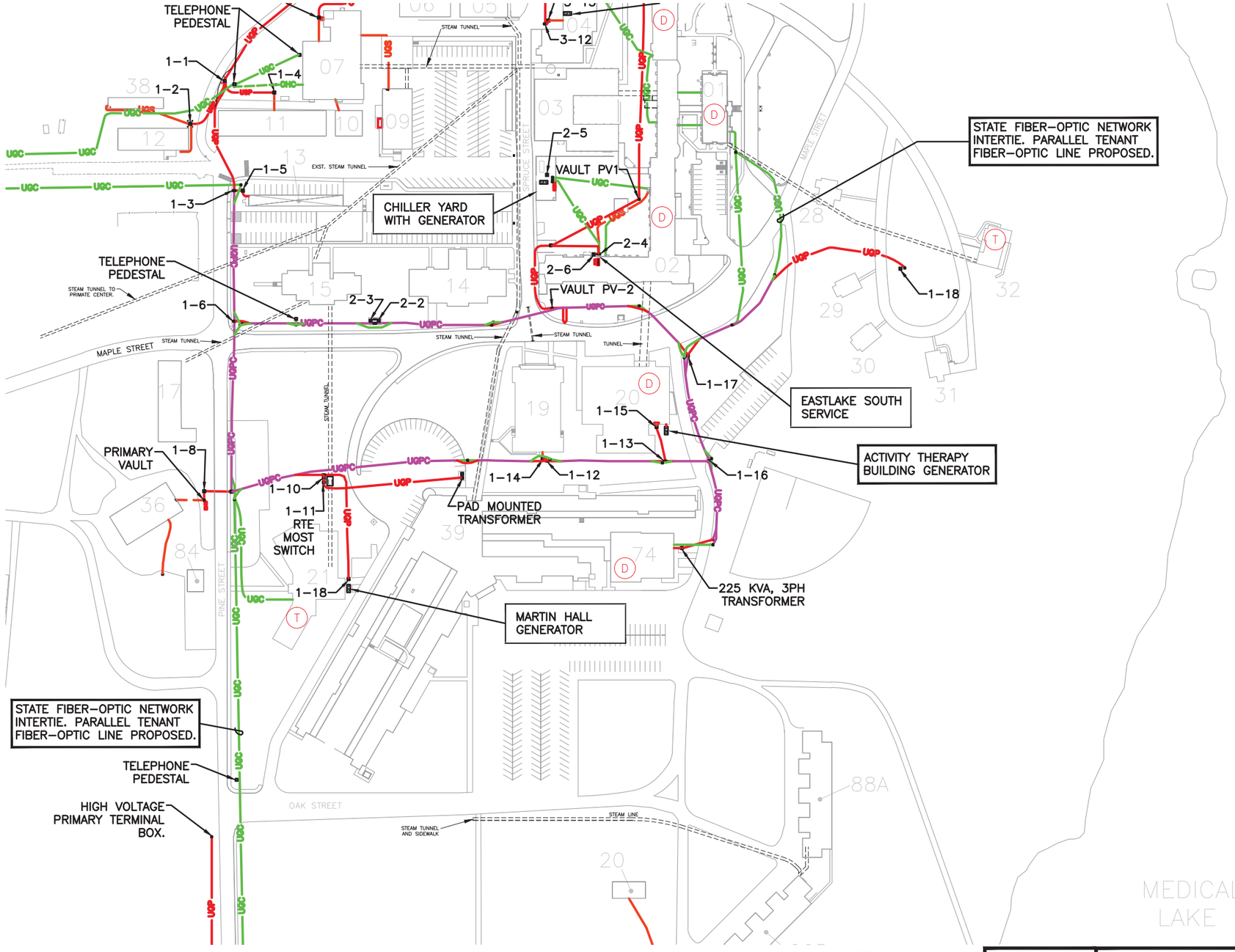
SCALE: 1" = 100'

SHEET E-3

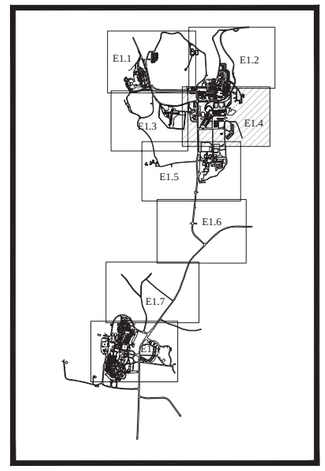
ESH INFRASTRUCTURE MASTER PLAN

ELECTRICAL

CADD FILE:




| EASTERN STATE HOSPITAL ELECTRICAL SITE DEFICIENCIES | |
|---|---|
| RECOMMENDATION | COST |
| UPGRADE EASTERN STATE CAMPUS PERSONAL DURESS ALARM SYSTEM (PDAS) | $3,412,000 |
| PROVIDE TENANT FIBER–OPTIC NETWORK FROM EASTERN STATE TO LAKELAND VILLAGE | $250,000 |
| NOTE: OTHER ELECTRICAL OPTIONS / RECOMMENDATIONS FOR EASTERN STATE HOSPITAL ARE LIMITED TO INDIVIDUAL BUILDINGS | |




KEYMAP

NORTH

100 50 0 100 200

SCALE FEET

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SCALE: 1" = 100'

SHEET E-4

ESH INFRASTRUCTURE MASTER PLAN

ELECTRICAL

DWN: DAD DATE: ---------
CK'D: RCP DATE: ---------

CADD FILE:

13.2KV AVISTA OVERHEAD LINE

METER POLE

13.2KV AVISTA OVERHEAD LINE

13.2KV AVISTA OVERHEAD LINE

AVISTA OVERHEAD SERVICE DROP
2 SETS 4#350 KCMIL, 1#2/0

POPLAR STREET

TO LAKELAND VILLAGE

13.2KV AVISTA UNDERGROUND PRIMARY

TELEPHONE PEDESTAL

PRIMARY DROP POLE UNDERGROUND FROM HERE NORTHWARD.

13.2KV AVISTA OVERHEAD LINE

J1

TELEPHONE PEDESTAL

RISER POLE

TELEPHONE PEDESTAL

STATE FIBER-OPTIC NETWORK INTERTIE. PARALLEL TENANT FIBER-OPTIC LINE PROPOSED (SEE ESH LIST).

TELEPHONE PEDESTAL

RISER POLE WITH 25 KVA TRANSFORMER FOR BLDG 13

13.2KV AVISTA OVERHEAD LINE

PINE LODGE

RESIDENCE UNIT GENERATOR

225 KVA

RUSTED ENCLOSURE

225 KVA

225 KVA

J2

J3

25 KVA

112.5 KVA

500 KVA

SEWAGE LIFT STATION

DRY-TYPE TRANSFORMER OUTSIDE

AVISTA UNDERGROUND SERVICE DROP

15 KVA

13.2 KV AVISTA UNDERGROUND PRIMARY

ABANDONED APARTMENT BUILDINGS – ELECTRICITY DISCONNECTED

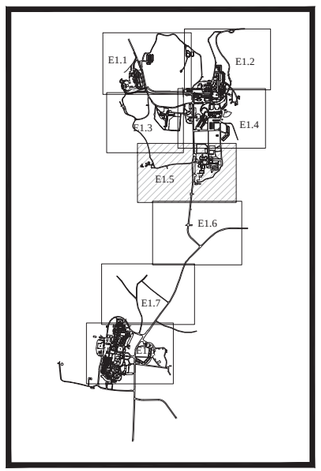
J4

DRY-TYPE TRANSFORMER OUTSIDE

PINE LODGE FIRE ALARM ANNUNCIATOR IN UNOCCUPIED SHU BUILDING.

FIRE ALARM CONTROL PANEL FOR BUILDINGS 07,08,09,10,11,12 IN BUILDING THAT IS BEING DEMOLISHED.

| PINE LODGE ELECTRICAL SITE DEFICIENCIES | |
|---|---|
| RECOMMENDATION | COST |
| RECONFIGURE PINE LODGE FIRE ALARM SYSTEM FOR BUILDINGS PL07 THRU PL12 | $125,000 |
| REVISE PINE LODGE FIRE ALARM SYSTEM ANNUNCIATION TO ATTENDED LOCATION | $100,000 |
| REPLACE PINE LODGE DRY-TYPE TRANSFORMERS WITH INDOOR DRY-TYPE TRANSFORMERS | $300,000 |




KEYMAP

NORTH

100 50 0 100 200

SCALE FEET

REVISIONS

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CK'D: RCP DATE: --------

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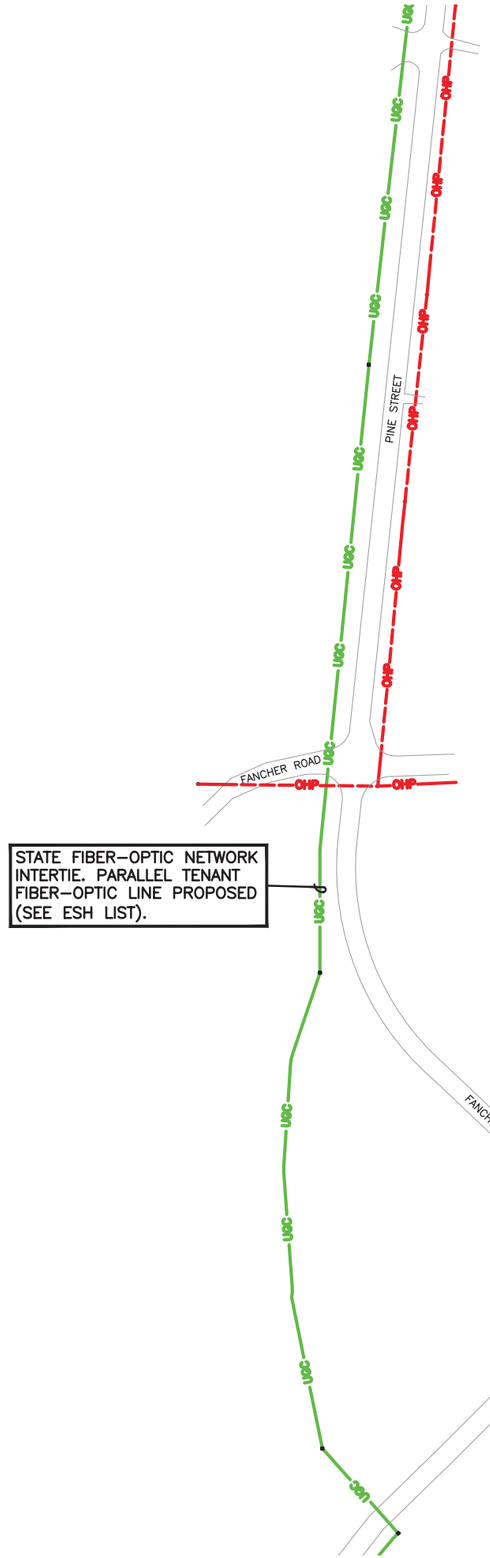
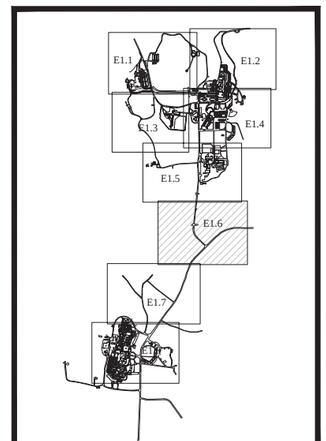
SHEET E-5

ESH INFRASTRUCTURE MASTER PLAN

ELECTRICAL

CADD FILE:




KEYMAP

NORTH

100 50 0 100 200

SCALE FEET

REVISIONS

DWN: DAD DATE: --------

CK'D: RCP DATE: --------

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SCALE: 1" = 100'

SHEET E-6

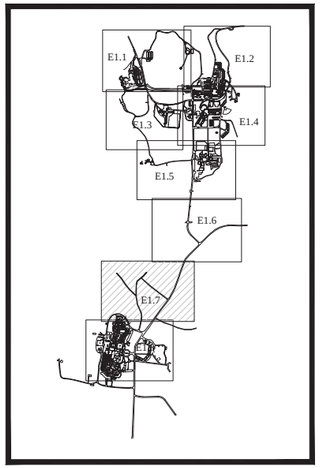
ESH INFRASTRUCTURE MASTER PLAN

ELECTRICAL

CADD FILE:

BUILDING

STATE FIBER-OPTIC NETWORK INTERTIE. PARALLEL TENANT FIBER-OPTIC LINE PROPOSED (SEE ESH LIST).




KEYMAP

NORTH

100 50 0 100 200

SCALE FEET

REVISIONS

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Electrical and Electronics System Design
400 S. Jefferson, Suite 301
Spokane, WA 99204
(T) 509.747.1888 (F) 509.747.1872

SCALE: 1" = 100'

SHEET E-7

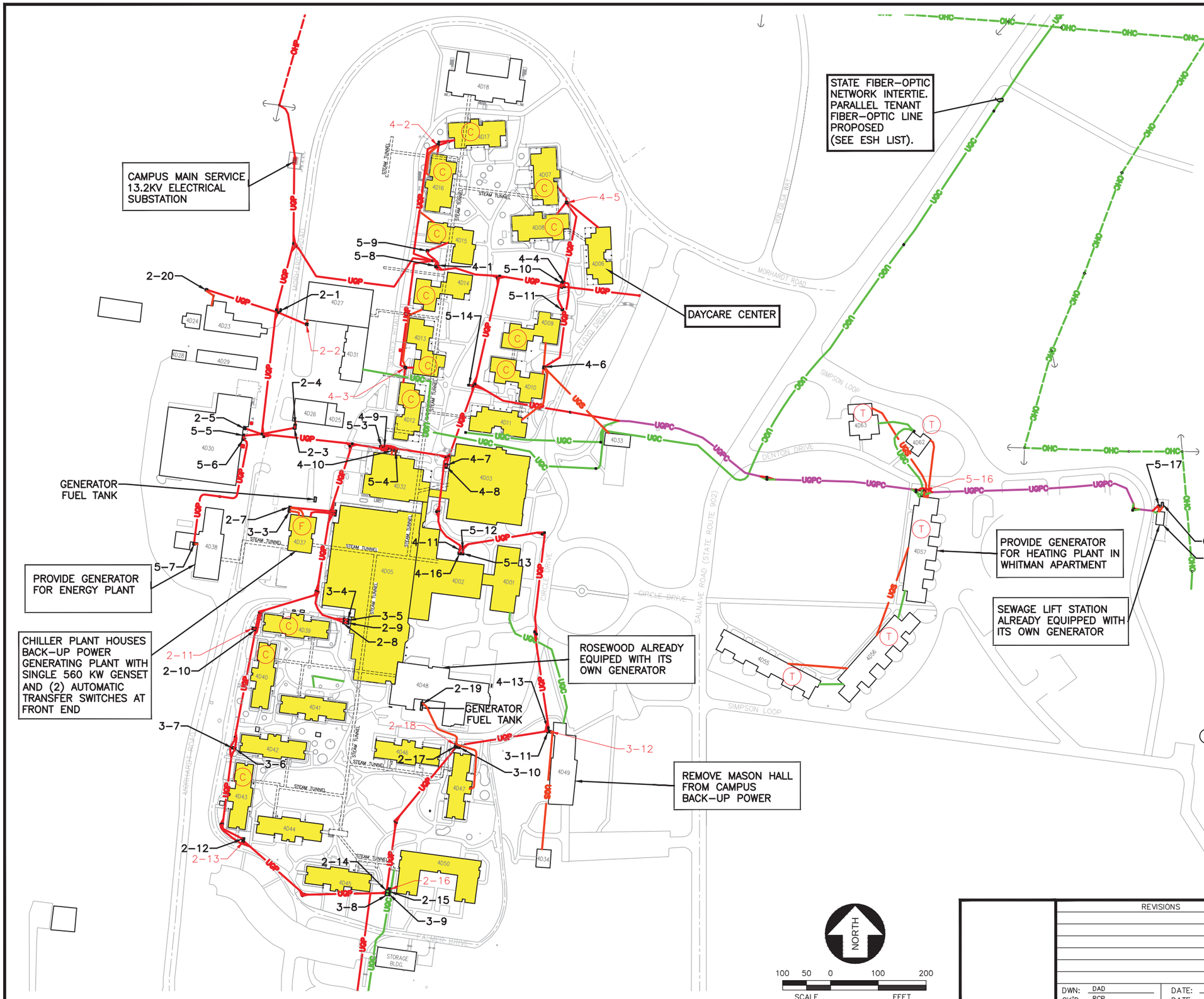
DWN: DAD DATE: ---------

CK'D: RCP DATE: ---------

ESH INFRASTRUCTURE MASTER PLAN

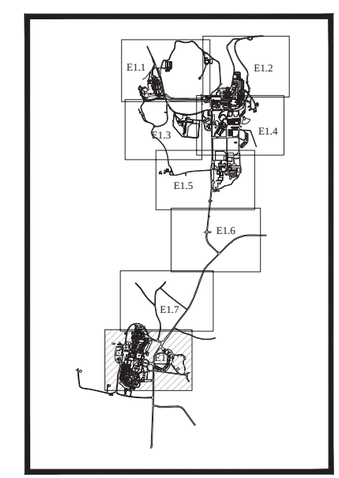
ELECTRICAL

CADD FILE: CADD




| LAKELAND VILLAGE ELECTRICAL SITE DEFICIENCIES | |
|---|---|
| RECOMMENDATION | COST |
| UPGRADE/RECONFIGURE CAMPUS ESSENTIAL ELECTRICAL SYSTEM DISTRIBUTION ARRANGEMENT | $10,000,000 |
| UPGRADE/RECONFIGURE CAMPUS ESSENTIAL ELECTRICAL SYSTEM GENERATION PLANT | $4,000,000 |
| PROVIDE STAFF CALL SYSTEMS WITH EVENT REPORTING IN ASSISTED LIVING FACILITIES | $1,300,000 |
| REPLACE TRANSFORMER PADS FOR TILTED PAD-MOUNTED TRANSFORMERS | $200,000 |
| NOTE: OTHER ELECTRICAL OPTIONS / RECOMMENDATIONS FOR LAKELAND VILLAGE ARE LIMITED TO INDIVIDUAL BUILDINGS | |

| PAD-MOUNTED TRANSFORMERS THAT HAVE TILTED DUE TO SETTLING | |
|---|---|
| DESIGNATION | STATUS |
| 2-02 | TILTED |
| 2-11 | TILTED |
| 2-13 | TILTED |
| 2-16 | TILTED |
| 2-18 | TILTED |
| 3-12 | TILTED |
| 4-02 | TILTED |
| 4-03 | TILTED |
| 4-05 | TILTED |
| 5-16 | TILTED |




KEYMAP

REVISIONS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Spokane, WA 99204
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SCALE: 1" = 100'

SHEET E-8

DWN: DAD DATE: --------
CK'D: RCP DATE: --------

ESH INFRASTRUCTURE MASTER PLAN

ELECTRICAL

CADD FILE:

ESH-1
OPTION: UPGRADE WESTLAKE BUILDING TO FULL DIRECT DIGITAL CONTROL (DDC) SYSTEM.

ESH-4
OPTION: CONVERT WESTLAKE AIR HANDLING UNIT FROM 100% OUTDOOR AIR TO RECIRCULATING TYPE.

ESH-5
OPTION: REPAIR THE HEAT RECOVERY SYSTEM AT THE WESTLAKE 100% OUTDOOR AIR AIR HANDLING UNIT.

ESH-6
OPTION: CONVERT THE WESTLAKE HOSPITAL STEAM BOILERS AND STEAM HEATING SYSTEM TO HEATING WATER.

ESH-7
OPTION: REPLACE THE WESTLAKE HOSPITAL STEAM BOILERS.

ESH-8
OPTION: CONVERT WESTLAKE CONSTANT VOLUME AIR SYSTEMS TO VARIABLE AIR VOLUME.

## ESH INFRASTRUCTURE AREA 1 - MECHANICAL

SCALE: N.T.S

KEYMAP

| REVISIONS | | | |
|---|---|---|---|
| | MW CONSULTING ENGINEERS<br>N. 222 Wall Street Suite 200<br>Spokane WA 99201<br>T. 509.838.9020<br>F. 509.838.1123 | SCALE: AS NOTED | SHEET M-1 |
| DWN: KIMP DATE: 5-12-2014<br>CK'D: JTS DATE: | ESH INFRASTRUCTURE AREA 1 - MECHANICAL | PROJECT NAME | |
| | | CADD FILE: 2014.225.01.M01 | |

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NORTH

100 50 0 100 200

SCALE FEET

NORTH BOILER PLANT 3A-04

ENERGY MANAGEMENT & CONTROL SYSTEM TERMINAL AT THIS LOCATION CAN MONITOR ALL POINTS OF THE SYSTEM BUT HAS NO ABILITY TO CHANGE VALUES SUCH AS TEMPERATURE, VALVE OR DAMPER POSITION, ETC.

ESH-2

OPTION: PROVIDE FLUE GAS HEAT RECOVERY FOR THE BOILER STACKS AT THE NORTH CAMPUS BOILER PLANT.

ESH-3

OPTION: REPLACE DEARATOR/MAKEUP WATER SYSTEM AT NORTH BOILER PLANT.

ESH-9

OPTION: RELOCATE EXISTING EASTLAKE DUAL-FUEL STEAM BOILERS TO NEW BOILER PLANT.

ESH-10

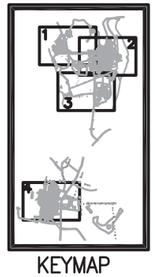
OPTION: SALVAGE EXISTING EASTLAKE GAS-FIRED HEATING WATER BOILERS.

ESH-11

OPTION: FINISH RENOVATION WORK AT THERAPY POOL.

## ESH INFRASTRUCTURE AREA 2 - MECHANICAL

SCALE: N.T.S.




KEYMAP

| REVISIONS | | | |
|---|---|---|---|
| | | | |
| DWN: KIMP | DATE: 5-12-2014 | | |
| CK'D: JTS | DATE: | | |

MW
CONSULTING ENGINEERS
N. 222 Wall Street Suite 200
Spokane WA 99201
T. 509.838.9020
F. 509.838.1123

SCALE: AS NOTED

SHEET M-2

ESH INFRASTRUCTURE AREA 2 - MECHANICAL

PROJECT NAME

CADD FILE: 2014.225.01.M01

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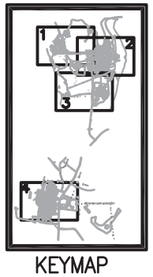
## ESH INFRASTRUCTURE AREA 3 - MECHANICAL

SCALE: N.T.S




KEYMAP

| | | | |
|---|---|---|---|
| | REVISIONS | MW CONSULTING ENGINEERS<br>N. 222 Wall Street Suite 200<br>Spokane WA 99201<br>T. 509.838.9020<br>F. 509.838.1123 | SCALE: AS NOTED<br>SHEET M-3 |
| | DWN: KIMP DATE: 5-12-2014<br>CK'D: JTS DATE: | ESH INFRASTRUCTURE AREA 3 - MECHANICAL | PROJECT NAME<br>CADD FILE: 2014.225.01.M01 |

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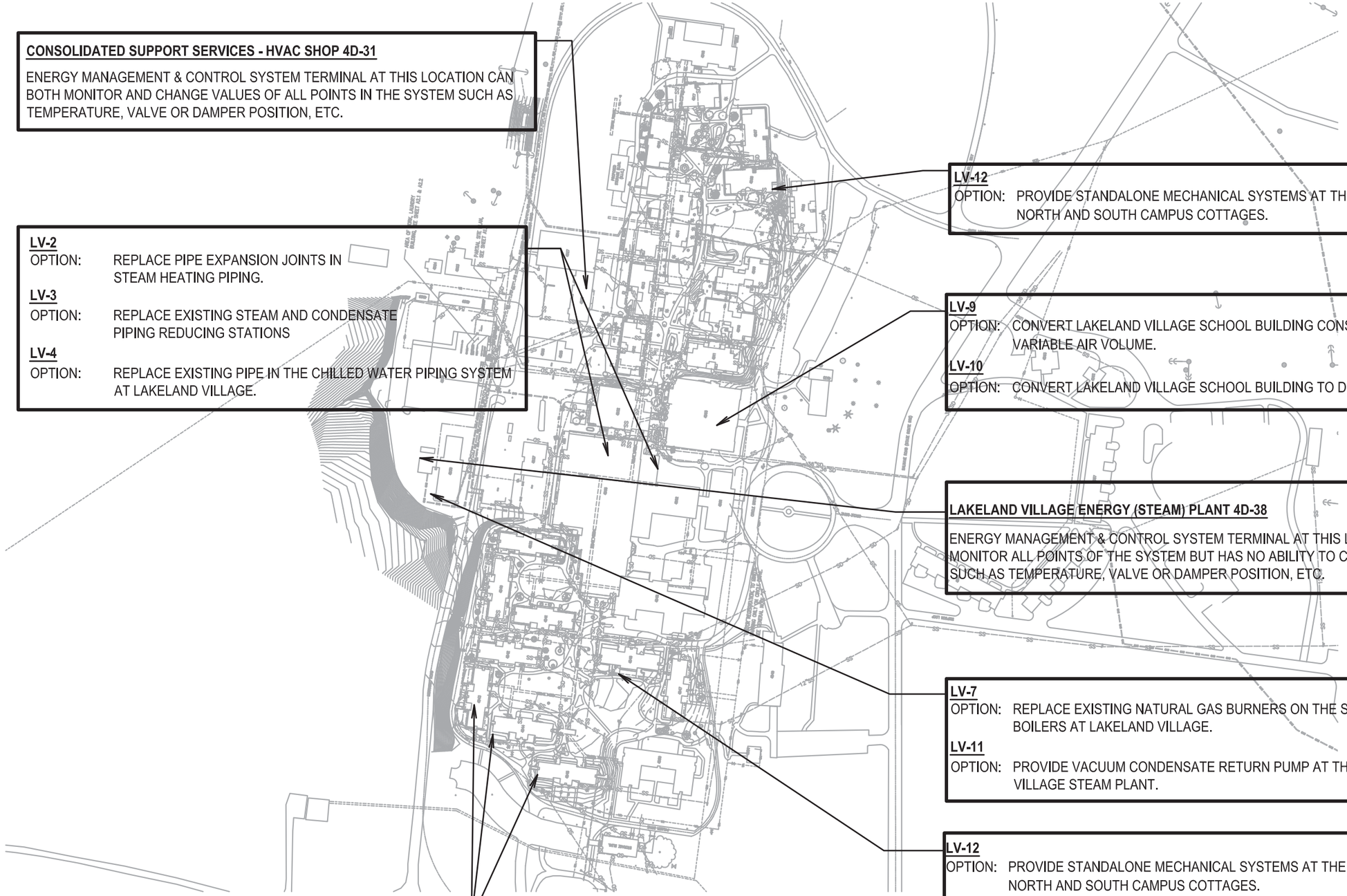

**CONSOLIDATED SUPPORT SERVICES - HVAC SHOP 4D-31**

ENERGY MANAGEMENT & CONTROL SYSTEM TERMINAL AT THIS LOCATION CAN BOTH MONITOR AND CHANGE VALUES OF ALL POINTS IN THE SYSTEM SUCH AS TEMPERATURE, VALVE OR DAMPER POSITION, ETC.

**LV-2**
OPTION: REPLACE PIPE EXPANSION JOINTS IN STEAM HEATING PIPING.

**LV-3**
OPTION: REPLACE EXISTING STEAM AND CONDENSATE PIPING REDUCING STATIONS

**LV-4**
OPTION: REPLACE EXISTING PIPE IN THE CHILLED WATER PIPING SYSTEM AT LAKELAND VILLAGE.

**LV-12**
OPTION: PROVIDE STANDALONE MECHANICAL SYSTEMS AT THE NORTH AND SOUTH CAMPUS COTTAGES.

**LV-9**
OPTION: CONVERT LAKELAND VILLAGE SCHOOL BUILDING CONSTANT VOLUME AIR SYSTEM TO VARIABLE AIR VOLUME.

**LV-10**
OPTION: CONVERT LAKELAND VILLAGE SCHOOL BUILDING TO DIRECT DIGITAL CONTROLS.

**LAKELAND VILLAGE ENERGY (STEAM) PLANT 4D-38**

ENERGY MANAGEMENT & CONTROL SYSTEM TERMINAL AT THIS LOCATION CAN MONITOR ALL POINTS OF THE SYSTEM BUT HAS NO ABILITY TO CHANGE VALUES SUCH AS TEMPERATURE, VALVE OR DAMPER POSITION, ETC.

**LV-7**
OPTION: REPLACE EXISTING NATURAL GAS BURNERS ON THE STEAM BOILERS AT LAKELAND VILLAGE.

**LV-11**
OPTION: PROVIDE VACUUM CONDENSATE RETURN PUMP AT THE LAKELAND VILLAGE STEAM PLANT.

**LV-12**
OPTION: PROVIDE STANDALONE MECHANICAL SYSTEMS AT THE NORTH AND SOUTH CAMPUS COTTAGES.

**LV-1**
OPTION: UPGRADE THE REMAINING HOUSING COTTAGES TO FULL DDC SYSTEM.

NORTH

100 50 0 100 200
SCALE FEET

## ESH INFRASTRUCTURE AREA 4 - MECHANICAL

SCALE: N.T.S.

KEYMAP

| REVISIONS | | | |
|---|---|---|---|
| | | | |
| DWN: KIMP | DATE: 5-12-2014 | | |
| CK'D: JTS | DATE: | | |

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N. 222 Wall Street Suite 200
Spokane WA 99201
T. 509.838.9020
F. 509.838.1123

SCALE: AS NOTED

SHEET M-4

ESH INFRASTRUCTURE AREA 4 - MECHANICAL

PROJECT NAME

CADD FILE: 2014.225.01.M01

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